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UNIVERSITY OF ALBERTA

SELF-MONITORING: A CROSS-CULTURAL STUDY

by

(C) H. M. NELLY KODERO

A THESIS
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE
OF MASTER OF EDUCATION

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY.

EDMONTON, ALBERTA
FALL, 1991.

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Best regards

Ray Wolfe

KODERO, H. M. NELLY,
UNIVERSITY OF ALBERTA,
3A-8916-112 STREET,
HUB - MALL,
EDMONTON, ALBERTA,
CANADA.
T6G 2C5.
25TH SEPT. 1990.

DR. MARK SNYDER,
COLLEGE OF ARTS AND SCIENCES,
UNIVERSITY OF MINNESOTA,
MINNEAPOLIS, MINNESOTA, 55455.

Dear Sir,

RE: SELF-MONITORING SCALE AND GENOTYPIC LEVEL.

Thanks for having done alot of work on self-monitoring construct. Your book "Public Appearances / Private Realities" is well-written and interesting. I have developled interest in self-monitoring and I am currently writing a thesis on it.

With your permission I would like to use your 18-item Self-Monitoring Scale in my study.

Please briefly explain to me in a few sentences what you meant by "genotypic" level in your book.

As a high self-monitor, allow me to say that I'm sorry for demanding too much from you--considering your busy schedule.

I remain hoping for your response.

Yours sincerely,

Kodero, H. M. Nelly.

Certainly, you have my permission to use the 18-item Self-Monitoring measure in your research.

Mark Snyder

It is difficult to score.

Items 1 thru 20 measure Concern for appropriateness

1, 4, 7, 10, 13, 16, 19 measure the subscale we call
Protective variability

2, 3, 5, 6, 8, 9, 11, 12, 14, 15, 17, 18, 20 measure the subscale we call
Protective social comparison

Items 21 thru 33 measure Self-monitoring

21, 23, 27, 29, 30, 32, 33 comprise the Ability subscale

22, 24, 25, 26, 28, 31 comprise the Sensitivity subscale

Response format is weighted this way: A = 5
B = 4
C = 3
D = 2
E = 1
F = 0

except for reverse-scored items, which are
items 20, 29, and 32
For these it is A = 0
B = 1
C = 2
D = 3
E = 4
F = 5

In college samples, here's what we tend to find:

	Mean	S.D.
Concern	52 to 55	11
Prot. variability	19 to 20	6
Prot. Soc. Comp.	33 to 35	8
Self-monitoring	40 to 43	6 or 7
Ability	20 to 22	4 or 5
Sensitivity	20	3 or 4

If you don't get values resembling these, you are probably making an error in calculating the score.

Psy. 355 research

Reply to each item by marking the appropriate circle on your answer sheet. Please use a Number 2 pencil and make your marks heavy, dark, thick, glossy.

These statements concern your reactions to a number of different situations. No two statements are exactly alike, so consider each statement carefully before answering. Select the response that tells how true or false the statement is, as applied to you. Use this response format:

A. certainly, always true
B. generally true
C. somewhat true, but with exception
D. somewhat false, but with exception
E. generally false
F. certainly, always false

1. I tend to show different sides of myself to different people.
2. It is my feeling that if everyone else in a group is behaving in a certain manner, this must be the proper way to behave.
3. I actively avoid wearing clothes that are not in style.
4. In different situations and with different people, I often act like very different persons.
5. At parties I usually try to behave in a manner that makes me fit in.
6. When I am uncertain how to act in a social situation, I look to the behavior of others for cues.
7. Although I know myself, I find that others do not know me.
8. I try to pay attention to the reactions of others to my behavior in order to avoid being out of place.
9. I find that I tend to pick up slang expressions from others and use them as part of my own vocabulary.
10. Different situations can make me behave like very different people.
11. I tend to pay attention to what others are wearing.
12. The slightest look of disapproval in the eyes of a person with whom I am interacting is enough to make me change my approach.
13. Different people tend to have different impressions about the kind of person I am.
14. It's important to me to fit in to the group I'm with.
15. My behavior often depends on how I feel others wish me to behave.
16. I am not always the person I appear to be.
17. If I am the least bit uncertain as to how to act in a social situation, I look to the behavior of others for cues.
18. I usually keep up with clothing style changes by watching what others wear.
19. I sometimes have the feeling that people don't know who I really am.
20. When in a social situation, I tend not to follow the crowd, but instead behave in a manner that suits my particular mood at the time.
21. In social situations, I have the ability to alter my behavior if I feel that something else is called for.
22. I am often able to read people's true emotions correctly through their eyes.

Continue using this response format:

A. certainly, always true
B. generally true
C. generally true, but with exception
D. generally false, but with exception
E. generally false
F. certainly, always false

23. I have the ability to control the way I come across to people, depending on the impression I wish to give them.

24. In conversations, I am sensitive to even the slightest change in the facial expression of the person I'm conversing with.

25. My powers of intuition are quite good when it comes to understanding others' emotions and motives.

26. I can usually tell when others consider a joke to be in bad taste, even though they may laugh convincingly.

27. When I feel that the image I am portraying isn't working, I can readily change it to something that does.

28. I can usually tell when I've said something inappropriate by reading it in the listener's eyes.

29. I have trouble changing my behavior to suit different people and different situations.

30. I have found that I can adjust my behavior to meet the requirements of any situation I find myself in.

31. If someone is lying to me, I usually know it at once from that person's manner of expression.
manner of expression

32. Even when it might be to my advantage, I have difficulty putting up a good front.

33. Once I know what the situation calls for, it's easy for me to regulate my actions accordingly.

Items 34 through 43 are about how you see yourself as a person -- how you feel about yourself and how you evaluate yourself. Please answer the questions in terms of how you see yourself at this point in your life. Use options ABCD only.

34. How well do I handle important decisions in my life?
    A. very well   B. fairly well   C. not too well   D. not well at all

35. How competent do I feel I am to do the things I'm really interested in doing?
    A. very competent   B. fairly competent   C. not too competent   D. not competent at all

36. How easy is it for me to form meaningful relationships with other members of my own sex?
    A. not easy at all   B. not too easy   C. fairly easy   D. very easy

37. How adequate do I feel to meet the intellectual requirements for doing good academic work?
    A. very adequate   B. fairly adequate   C. not too adequate   D. not adequate at all

38. How much respect do I feel for myself as a person?
    A. a great deal   B. a fair amount   C. not too much   D. not much at all

39. How easy is it for me to establish meaningful relationships with members of the opposite sex?
    A. very easy   B. fairly easy   C. not too easy   D. not easy at all

40. How confident do I feel about my potential for self-development in the next few years?
    A. very confident   B. fairly confident   C. not too confident   D. not confident at all

41. How interesting do I feel I am to other people?
    A. not interesting at all   B. not too interesting   C. fairly interesting   D. very interesting

42. How attractive do I think I am to members of the opposite sex?
    A. very attractive   B. fairly attractive   C. not too attractive   D. not attractive at all

43. On the whole, how satisfied am I with myself?
    A. very satisfied   B. fairly satisfied   C. not too satisfied   D. not satisfied at all

For items 44 through 60, please indicate how each statement applies to you.
Use this response format:
A = not at all characteristic of me
B = slightly characteristic of me
C = moderately characteristic of me
D = very characteristic of me
E = extremely characteristic of me

44. I worry about what other people will think of me even when I know it doesn't make any difference.

45. I am unconcerned even if I know people are forming an unfavorable impression of me.

46. I am frequently afraid of other people noticing my shortcomings.

47. I rarely worry about what kind of impression I am making on someone.

48. I am afraid that others will not approve of me.

49. I am afraid that people will find fault with me.

50. Other people's opinions of me do not bother me.

51. When I am talking to someone, I worry about what the other person may be thinking about me.

52. I am usually worried about what kind of impression I make.

53. If I know someone is judging me, it has little effect on me.

54. Sometimes I think I am too concerned with what other people think of me.

55. I often worry that I will say or do the wrong things.

56. I like to be with people.

57. I welcome the opportunity to mix socially with people.

58. I prefer working with others rather than alone.

59. I find people more stimulating than anything else.

60. I'd be unhappy if I were prevented from making many social contacts.

For items 61 through 72, please use this response format:

A = very much willing to do this
B = fairly willing
C = slightly willing
D = not very willing
E = not at all willing to do this

How willing are you to:

61. Give a lecture to a large audience?

62. Raise your hand to ask a question in a meeting or lecture?

63. Volunteer to head a committee for a group of people you do not know very well?

64. Tell a person that you like him/her?

65. Publicly challenge a speaker whose position clashes with your own?

66. Accept a nomination to be a leader of a group?

67. Present a personal opinion, on a controversial issue, to a group of strangers?

68. When asked to introduce yourself, say something more personal about yourself than just your name and occupation.

69. Give an informal talk in front of a small group of classmates or colleagues?

70. Speak up about your ideas even though you are uncertain of whether you are correct?

71. Perform on a stage before a large audience?

72. Give your opinion on a controversial issue, even though no one has asked for it?

This is the end of the first questionnaire.
Check to make sure you have answered all 72
items, then turn in this booklet and your
Answer Sheet.

Next, go on to the Life Events Questionnaire. Read the instructions and write your responses on the form, as indicated.

UNIVERSITY OF ALBERTA

RELEASE FORM

NAME OF AUTHOR: H. M. Nelly Kodero

TITLE OF THESIS: Self-Monitoring: A Cross-Cultural Study

DEGREE FOR WHICH THESIS WAS PRESENTED: Master of Education

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(Signed)..

PERMANENT ADDRESS:

Urudi School,
P. O. Box 28,
Pap-Onditi, KISUMU,
KENYA (E. Africa).

DATE July 22, 1991.

If a man will begin with certainties, he shall end in doubts; but if he will be content enough to begin with doubts, he shall end in certainties.

(Francis Bacon, 1561-1626)

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled "Self-Monitoring: A Cross-Cultural Study", submitted by H. M. **Nelly Kodero** in partial fulfillment of the requirements for the degree of Master of Education in Educational Psychology.

Robert Frender

Dr. Robert H. Frender (Supervisor)

RH Short

Dr. Robert H. Short (Superv. Comm. Member)

Dr. Doug Wahlsten (Superv. Comm. Member)

DATE July 4, 1991

In loving memory of my father, NELSON ODERO, with whom I experienced the beauty of education.

And

To those educators who can say and do what they believe in without wounding the feelings of their students.

Abstract

The study investigated the construct validity of the Self-Monitoring Scale and cross-cultural differences in self-monitoring. Canadian and Kenyan college students were measured using the 18-item Self-Monitoring developed by Snyder (1986). Confirmatory factor analysis showed that the scale had high construct validity for both Canadian and Kenyan cultures; the factor loadings obtained for my Canadian and Kenyan samples were congruent with the factor loadings obtained by Snyder and Gangestad (1986) for their American sample. ANOVA showed that the mean score for the Canadians ($M = 9.9$) was significantly higher ($p < .001$) than the mean score for the Kenyans ($M = 8.2$), and that the mean score for the male subjects ($M = 10.0$) was significantly higher ($p < .001$) than the mean score of the female subjects ($M = 8.8$). There was no significant interaction between culture and sex in self-monitoring.

The Self-Monitoring Scale was decomposed into two subscales -- Public Performing and Other-Directedness that were identified by Briggs and Cheek (1988). The results showed significantly higher ($p < .001$) Public Performing scores for Canadians and male subjects. There was no significant main effect for culture or sex on Other-Directedness. There was no significant interaction between culture and sex for either subscale.

ANOVA also showed that there was no significant difference between the mean scores for urban and rural dwellers in either culture in self-monitoring. ANOVA results indicated no significant difference between the mean scores of the subjects interested in teaching and and the

subjects interested in science based careers in self-monitoring. The scale failed to differentiate subjects with different career interests.

Gudykunst, Yang, and Nishida (1987) reported that the self-monitoring scores of the Americans were significantly different from the mean score of the Japanese and Koreans. In light of my findings, and the findings reported by Gudykunst et al., it was concluded that culture is one of the major factors determining the development of self-monitoring.

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I am deeply thankful to my supervisor, Dr. Robert Frender for his ever present constructive advice and for his gentle and respectful nudges.

I wish to thank in a special way Dr. Robert Short, a member of my supervisory committee, who welcomed me to the department as a foreign student, effectively served as my academic adviser, and constructively advised me on this thesis.

I also wish to thank in a special way Dr. Doug Wahlsten, a member of my supervisory committee for his ever resourceful contributions and for having kindly arranged for me to administer my research instruments to his students.

I must also thank Dr. Robert Crawford who cancelled his Physics class to enable me to administer the Scale to his students; I must also thank in a special way Dr. Charles Norman who allowed me to test students in his Education class; and I must thank in a special way Mr. Francis Munyithya who assisted me in the administration of the scale to the students at Kenyan Technical Teachers College in Nairobi, Kenya.

I must thank Lynn Pinnell who assisted me in learning SPSSx program, without which I would have found it difficult to analyze my data.

My special thanks also go to all those who participated in this study by allowing me to peer through the windows of their lives.

Finally, my special thanks goes to the Canadian Commonwealth Scholarship and Fellowship Committee for having awarded me a prestigious Commonwealth Scholarship that enabled me to produce this work.

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CHAPTER I

INTRODUCTION

For a long time psychologists have recognized that individuals are capable of exercising control over their expressive behavior, thereby affecting the impressions that others form of them. They (Alexander & Knight, 1971; Bem & Allen, 1974; Goffman, 1955; James, 1890; Moos, 1968; Snyder, 1974) have also noted that human behavior is situation specific and that individuals differ in the degree to which they control their expressive behaviors in social settings. William James had notions about situational specificity of self presentation. He observed that:

> A man has as many social selves as there are individuals who recognize him and carry an image of him in the their mind....But as the individuals who carry the images form naturally into classes, we may practically say that he has as many different social selves as there are distinct groups of persons about whose opinions he cares. He generally shows a different side of himself to each of these different groups. We do not show ourselves to our children as we do to our club companions, to our employers and to our intimate friends. From this results what practically is a division of man into several selves (James, 1890, Vol. 1, p. 294).

James's notions of the situational specificity of self-presentation have been echoed by successive generations of self theorists. Goffman (1955) likened social interaction to a theatrical performance in which each person acts out a "line". A line is a set of carefully chosen verbal and nonverbal acts that express one's self.

Lines can and do shift from situation to situation as different social roles and social expectations become differentially salient. Goffman also argued that individuals use available social cues to monitor and to adapt their self-presentation to convey a desired impression to their audience.

Moos (1968) reported that the behavior of hospitalized psychiatric patients is less variable across situations than is that of normals. One interpretation of this finding is that psychiatric patients are unable or unwilling to monitor their social behavior in a situationally appropriate manner.

Alexander and Knight (1971) noted that for each social setting or interpersonal context there is a pattern of social behavior that conveys an identity that is particularly appropriate to the social situation. They called this behavioral pattern a "situated identity". According to them, people strive to create the most favorable situational identities for themselves in their social encounters. Bem and Allen (1974) reported that individuals differ substantially in response to social situations. Based upon a self-report measure, individuals were divided into two groups: those who reported that they exhibited considerable cross-situational consistency in their friendliness and conscientiousness, and those who reported that they exhibited considerable variability in their behavior. For the former group there was a strong relationship between the individual's traits and behavior in a variety of settings, but for the latter group there was a weak relationship.

In contrast to research by Bem and Allen, which restricted itself to the traits of friendliness and conscientiousness, Snyder (1974), in his theory of self-monitoring, has proposed that there may be more generalized tendencies for the behavior of individuals to be predicted by traits. His theory states that, when determining what behavior to engage in, an individual can draw from either situational cues or can rely on internal predispositions, attitudes, and values. In other words, the theory posits that there are two main sources of information available to individuals to guide their behaviors: Information about situational and interpersonal specifications of appropriate behavior, and information about their inner states.

A longstanding issue in psychology (Mischel, 1968) is whether behavior is controlled more by external situational factors or more by internal personality traits and dispositions. My own experience, and the work of Snyder (1974) and his colleagues (Snyder & Monson, 1975; Snyder & Tanke, 1976; Snyder & Swann, 1976), suggests that some people are more concerned about behaving in a "correct" or appropriate way in social situations, and are better than others at monitoring their behavior accordingly. What Snyder has suggested is that sensitivity to the social situation may itself be a personality trait, which he labelled self-monitoring.

The Purpose of the Study

Research on self-monitoring is concerned with the processes by which individuals make and enact their behavioral choices in social context (Snyder, 1979). It addresses fundamental questions: How might individual differences in self-control of expressive behavior arise? What might be the developmental, historical, and current motivational origins of self-control ability and performance? In the past few years, most of the research has concentrated on exploring the meaning of self-monitoring as a construct, developing a self-monitoring scale, and on establishing relationships between the self-monitoring trait and other personality variables. Why is the behavior of some individuals more situationally influenced than the behavior of other individuals? Although they did not provide sufficient evidence to support their claim, Snyder and Gangestad (1986) suggested that individual differences in responsivity to social clues are largely genetic in origin. To increase our understanding of the developmental origins of individual differences in responsivity to social clues as determinants of behavior, my research investigated the role of cultural factors in the personality trait of self-monitoring.

One of the major objectives of the study was to find out if the Self-Monitoring Scale measured the same factors or constructs in the subjects from two distinct cultures.

The other major objective of the study was to find out if there are any cross-cultural differences in self-monitoring.

The study also sought to understand the effects of gender, environment, and career interest on self-monitoring.

Assumptions of the Study

1. One of the major assumptions made in this study is that self-monitoring as a personality variable is expressed in all individuals regardless of their culture.

2. The other assumption was that personality is fairly consistent after the formative years, and that the rural dwellers, although they may be attending colleges in the urban centers, still reflect some

patterns of social behavior characteristic of the collective nature of the rural life.

Organization of the Thesis

This thesis comprised five chapters including this introductory chapter. Chapter II contains a review of the theoretical and research literature related to self-monitoring. Chapter III focuses on the research design and methodology. It includes a detailed report on how the subjects were recruited, how the scale was administered to the subjects, and how the data were analyzed. Chapter IV reports on the results obtained from the data analyses. Chapter V is a discussion of the findings as they relate to findings of other studies. This final chapter also contains conclusions, suggestions for further studies and limitations of the study.

CHAPTER II

LITERATURE REVIEW

This chapter contains a review of the theoretical and research literature related to self-monitoring. It includes an examination of the theoretical meaning and framework of self-monitoring. It includes a discussion of the characteristics of high and low self-monitors. The chapter also contains a detailed discussion on the construction and validation of the Self-Monitoring Scale -- reporting on a number of factor analytic studies that have been carried out using the scale. It critically examines the origins and the discontinuous nature of the construct as was proposed by Snyder. Finally, it puts self-monitoring into perspective by relating it to other well known personality variables.

Meaning of Self-Monitoring

Snyder (1974) conceptualized self-monitoring as a unitary construct that reflects the individual's tendency to employ the tactics of impression management in his or her relation with others. It is apparent that the intellectual roots of the self-monitoring construct can be traced back to the classic pragmatic theories of the "Self". Implicit in the self theories is the view that individuals differ in the extent to which they rely on either situational characteristics or inner states in regulating their behavior.

According to Snyder's theory, there are two types of individuals: *high self-monitors and low self-monitors*. High self-monitors are those individuals whose behavior is guided mainly by situational cues. They are flexible and adaptive individuals. They first observe the characteristics of the situation that confronts them to identify a prototype of ideal persons or relevant others for guidelines on how to present themselves. They display marked situation-to-situation specificity in behavior, and the correspondence between their behavior and attitude is minimal. In other words their attitudes and behavior are uncorrelated, and to predict and understand their actions one would seek information about characteristics of the situation. They shrewdly and pragmatically tailor their social behavior to fit situational and interpersonal specifications of appropriateness. They tend to define their identities in terms of characteristics of the situation in which they find themselves. Their self-conceptions reflect a high degree of relationship and involvement with other people.

On the other hand, low self-monitors consistently display behavior that is controlled by internal factors such as beliefs, attitudes, and dispositions. They show greater consistency in behavior across situations and greater congruence between attitudes and behavior. In other words the covariation between their social behavior and underlying traits, dispositions, attitudes, and beliefs is substantial. They display considerable temporal stability in their behavior and their future behavior can be predicted from measures of relevant present attitudes, dispositions, and beliefs. They first read the characteristics of the situation that confronts them and then use stored information to determine the course of their action or behavior. They cherish images of themselves as rather principled individuals who wish to live their lives according to their beliefs. They tend to construe their identities in terms of enduring attributes that reside within themselves.

In a recent literature review, Furnhan and Capon (1983) reported two major abilities of high self-monitoring individuals. The first ability is that of monitoring the situation, or what they call "self-monitoring sensitivity". This refers to the high self-monitoring individual's greater sensitivity to aspects of the situation that provide clues to appropriate self-presentation. The second ability is that of modifying behavior or "behavioral flexibility". This refers to the characteristic most frequently associated with high self-monitoring individuals -- the ability to control their behavior to suit the situation.

Self-discrepancy theory (Higgins, 1983) states that there is a gap between one's actual self and one's ideal self. According to Higgins, high self-monitors are more likely to notice a discrepancy between actual self and ideal self and to use the ideal self as a guide to self-presentation. Berger and Douglas (1981) reported differences in perception of how informative formal and informal situations are in reducing the uncertainty level of self-monitoring. Low self-monitors perceive formal situations as more informative, while high self-monitors see informal situations as more informative. This finding is consistent with Ickes and Barnes (1977), who reported that high self-monitors initiate and regulate conversations more, initiate more conversational sequences, and have a greater need to talk than low self-monitors. Siegman and Reynolds (1983) reported that high self-monitors are more accurate than low self-monitors in detecting deception. Briggs and Cheek (1988) reported that the high self-monitor is the quintessential person of social psychology: pragmatic and flexible, thoughtful, carefully attuned to social cues and well rehearsed in appropriate scripts. The high self-monitor is the consummate politician who is ever attentive to the necessities of the moment. The low self-monitor on the other hand is the epitome of the person in personality psychology, inward looking and self-reflective. Larkin (1991) reported that prototypical high self-monitor portrayed by the 18-item Self-Monitoring Scale appears to be a very social creature, skilled in interpersonal communication and adept at managing self-presentation. The low self-monitor comes across as the internally consistent individual who relates to others in a straightforward way that reflects the inner self.

Snyder (1979) summarized findings indicating that the prospect of social interaction may lead the high self-monitoring individual to engage in perceptual and cognitive processes that direct the search for information about another individual. As a consequence of these processes, the high self-monitoring individual may possess greater amounts of relevant information about a target person than does low self-monitoring individual. Thus the high self-monitoring individual may possess more information on which to base impression management decisions.

Snyder (1987) avoided placing any value judgements on either low or high self-monitoring interpersonal styles. But according to Larkin (1991), any composite integrity measure is clearly value laden. Larkin reported that prototypical (extreme) descriptions produced negative ratings on sincerity and honesty for the high self-monitors and on rigidity and obstinacy for low self-monitors -- which are negative judgements.

Self-Monitoring Scale

Empirical research on the self-monitoring construct began with the construction and validation of the Self-Monitoring Scale. The scale was first developed by Snyder in 1974. In developing the Scale Snyder sought to assess five hypothetical components of the construct: (a) concern for appropriateness of social behavior, (b) attention to social comparison information, (c) ability to control or modify self-presentation, (d) use of these abilities in particular situations, and (e) cross-situational variability of social behavior.

The Original 25-Item Self-Monitoring Scale

The original Self-Monitoring Scale consisted of 25 items (see Appendix iv). In responding to this scale each item is answered true or false, with a low total score indicating a low self-monitoring individual and a high total score indicating high self-monitoring individual. Until recently, the total score on the original 25-item Self-Monitoring Scale represented the only measure of the self-monitoring construct. Snyder and Gangestad (1985) reported that the scale has a KR-20 reliability of .66 and a one-month interval, test-retest reliability of .83.

The popularity of the self-monitoring construct has prompted many psychologists to use the original self-monitoring scale in a number of studies. Synder originally assumed that the Self-Monitoring Scale was unidimensional. The assumption has been challenged by many self-monitoring researchers. The scale has been criticized by many investigators who have used it. The criticisms refer to the conceptualization of the construct, the relation between the construct and the measuring instrument, and dimensionality. Most factor analytic studies have shown that the scale is multidimensional, not unidimensional as it was intended to be.

Briggs, Cheek, and Buss (1980) factor analytic study found that the scale did not measure the five hypothetical components as proposed by Snyder. According to them the scale measures three factors: (a) Acting Ability, (b) Extraversion, and (c) Other-Directedness. Using the raw subscale scores, they intercorrelated the three factors and got the following results: Extraversion with Other-Directedness r = - .11, Extraversion with Acting r = - .31, and Other-directedness with Acting r = .13. They concluded that the factors measured by the Scale were orthogonal (uncorrelated) and it was only Acting and Extraversion that were slightly correlated. Other-Directedness in terms of its correlation was essentially independent of the other two factors. This finding demonstrated that there was lack of congruence between the scale and the construct. Their suggestion was that the presence of these three factors clarified cases in self-monitoring research where self-monitoring hypotheses have not been supported. They also found a mismatch between the scale and the construct in the sense that the scale's factors correlate dissimilarly with measures of other variables. They found a correlation of .35 between Sociability and the Extraversion factor and a correlation of .05 between Sociability and the Other-Directedness factor. A greater dissimilarity is associated with their measure of Shyness. It correlates -.56 with Extraversion factor, and .37 with Other-directedness factor. These findings indicate that the person who scores high on the Extraversion factor tends to be outgoing and socially confident, whereas the person who scores high on the Other-directedness factor tends to be anxious, shy, and lacking in confidence. It is very unlikely that the same individual will score high on both factors. Thus it is difficult to determine what the scale as a whole might be measuring.

Tobey and Tunnel (1981) found three similar factors, but the items loading on the factors varied somewhat. Gabrenya and Arkin (1980) reported four factors when they examined the construct validity of the scale. They labeled these dimensions Theatrical Acting Ability, Sociability, Other-Directedness, and Speaking Ability. Dillard, Hunter and Burgoon's (1984) study revealed four factors: Extraversion, Sociability, Other-Directedness, and Acting. These finding are consistent with Briggs and Cheek's (1986) conclusion that the self-monitoring scale is not unidimensional, but that it measures at least three factors.

In addition to the issue of the Self-Monitoring Scale's factor structure, some authors have questioned the discriminant validity of the original scale. For example, some investigators have found positive correlations between self-monitoring and extraversion (Briggs et al 1980; Lennox & Wolfe 1984). As well Riggio & Friedman (1982) found further correlations of Self-Monitoring Scale with Taylor Manifest Anxiety Scale, Coopersmith's Self-Esteem Inventory, and the Machiavellianism Scale.

Extraversion is not among Snyder's five hypothetical components of the construct. Lennox (1982) showed that four items (12, 14, 22, and 23) in Snyder's (1974) scale consistently load together to define an extraversion factor. Snyder (1979) implied that extraversion should be unrelated to self-monitoring when he listed it among variables against which his scale displays discriminant validity. In fact Snyder and Gangestad (1982) treated the two constructs, extraversion and self-monitoring as very separate entities even though their measures have shown a significant positive relationship between them. Snyder (1987) argued that the relation of the self-monitoring to extraversion which has been obtained in various studies is due to the particular aspect of extraversion that is inherent in the self-monitoring construct and not as a general extraversion factor. To him the major factor in the scale is a general self-monitoring factor, while other factors are minor ones.

The 13-Item Self-Monitoring Scale

Inadequacy of Snyder's original 25-item Scale in measuring self-monitoring level prompted Lennox and Wolfe (1984) to undertake a thorough revision of the scale. After the generation of new items and repeated factor analyses, the authors developed a 13-item Likert scale (see Appendix v). Their development of a Likert scale was appropriate because it has been pointed out, for instance by Andrews (1984) that the response scales with fewer than five options tend to yield low reliability. The Likert format is less susceptible to item skewness, a variable that can limit the magnitude of interitem correlations and thereby distort the factor structure of a scale (Comrey, 1978).

The revised 13-item Self-Monitoring Scale was purported to measure only sensitivity to the expressive behavior of others and the ability to modify self-presentation. Adopting a narrower view of the construct than did Snyder, Lennox and Wolfe thus defined self-monitoring with a two component model in which the self-monitor is thought to have the ability to modify his self-presentation and be sensitive to the expressive behavior of others. The combination of these two dimensions comprise the self-monitoring process. For each of these components they created subscales that have proved to be face valid, internally consistent, and empirically distinct. The subscales are: (a) Ability to Modify Self-Presentation Scale - simply called "Ability Scale" and (b) Sensitivity to the Expressive Behavior of Others Scale - simply called "Sensitivity Scale". The Ability subscale contains 7 items measuring social acting skills. The Sensitivity subscale contains 6 items measuring response to other's behavior.

Wolfe, Lennox, and Cutler (1986) who administered the Revised Self-Monitoring Scale to 219 college students, found significant positive correlations with measures of Interpersonal Competency, Active Acting style, and Social Self-Efficacy, and significant negative correlations with measures of Passive Acting style, and Avoidance of Social Acting situations. These data indicate that people who score high on Self-Monitoring Scale describe themselves as having better developed social skills and are more likely to adopt an active, directive role in some interpersonal situations than those who score low. They advised that developmental studies are needed, and it would be interesting to see whether the scale has validity for other domains.

Snyder (1987) criticized the Lennox and Wolfe Self-Monitoring Scale for its narrowness -- many of the items in the Scale are restatements. Restatements increase reliability due to correlated error components rather than due to increments in validity. He further reported that eleven items are keyed in the same direction and only two of the items are keyed in the other direction, and because of the unevenness in the direction of keying some of the reliable variance in using the scale could be due to response bias.

The 18-Item Self-Monitoring Scale

After receiving criticisms from different investigators Synder and Gangestad (1986) reexamined the original 25-item Self-Monitoring Scale with the aim of improving its validity. Although they acknowledged that the scale is multidimensional, and included several sources of variance, they rejected some of the criticisms as being baseless. They maintained that the major component of the Self-Monitoring Scale is a general Self-monitoring factor and that other factors are minor ones. They further argued that the three-factor, rotated structure as revealed by Briggs et al. (1980) is not as informative as an unrotated solution in determining the causes of the variance. They argue that there were no compelling reasons to regard the rotated factor structure as containing the "true" latent entities that underlie observed variation in self-monitoring propensities. In their arguments they cited Catell (1978), who stated that rotation to simple structure is unlikely to be meaningful if the items being factor analyzed were all intended to load on a single factor.

Snyder and Gangestad further argued that the proper procedure for the factor analysis of the self-monitoring scale is to employ the unrotated principal axes solution. The first unrotated factor provides the major source of variance, representing the general self-monitoring construct. Employing the unrotated principal axes solution, they showed that 24 of the 25 items of the self-monitoring scale have positive loadings on the first unrotated factor, 18 of which have loadings greater or equal to .15. On the basis of their argument that the first unrotated factor is the best marker of the typological variable, they selected the already noted 18 items with loadings greater or equal to .15 on that scale to construct an abbreviated 18-item Self-Monitoring Scale (see page 48). In constructing the abbreviated scale they omitted the 7 items from the original scale mainly related to the Other-directedness factor. Analysis of the new scale showed there was an internal consistency of .70 (increased from .66), that the first unrotated factor accounted for 62% of the common variance (increased from 51% in the case of the original scale), that the total score was uncorrelated with the second, minor, unrotated factor, and that the correlation between the new measure and the original self-monitoring scale was .93. The authors emphasized that high scores on the new scale refer to the probability of belonging to the high self-monitoring class rather than greater "amounts of self-monitoring".

Miller and Thayer (1989) compared the original 25-item Self-Monitoring Scale and the abbreviated 18-item Scale using the traditional true-false response format and multipoint Likert response format. They gave half of their subjects both the 18- and 25-item Self-Monitoring Scales with true - false response format, and the other half were given both the 18- and 25-item Self-Monitoring Scale with Likert format. They then examined the internal consistency of each of the four possible combinations of scale version and response format. The results showed that the abbreviated 18-item Scale was more internally consistent than the original 25-item Scale. Thus by pruning seven items from the original scale, Snyder and Gangestad improved the internal consistency of the scale. Briggs and Cheek (1988) conducted a large scale factor analytic study, which showed that the abbreviated version of the Self-Monitoring Scale consisted of two factors: One factor, which they called Public Performing, is a combination of Extraversion and Acting, and the other factor is the Other-Directedness. The two-dimensionality of the abbreviated 18-item Scale was also revealed by Montag and Levin (1990). They conducted a factor analytic study in which they employed the well-established Eysenck Personality Questionnaire (EPQ-R) and Sixteen Personality Factor (16PF) as markers against the abbreviated 18-item Self-Monitoring Scale. Their results showed that the abbreviated scale consists of two factors. One was Extraversion; Acting and Other-Directedness collapsed, and yielded a second factor.

From the literature reviewed it is apparent that there is no ideal scale for measuring self-monitoring. The original 25-item Scale is multidimensional -- measuring at least three factors and yet it was purported to measure only one factor. The revised 13-item Scale is Likert in format but consists of several restatements and its high reliability could be due to correlated error components. The abbreviated 18-item Scale is multidimensional -- measuring at least two factors. The 18-item Scale is the best available -- it is more reliable than the original 25-item Scale and it does not contain restatements like the 13-item Scale.

Theoretical Framework of Self-Monitoring

Snyder and Gangestad (1986) claimed that self-monitoring is a discontinuous trait at genotypic level and continuous at phenotypic level. Snyder reported that:

> At a phenotypic level, self-monitoring tendencies are distributed continuously. That is, the extent to which people actually exercised self-control over their expressive behavior exists in all degrees and thus is continuously distributed, as are scores on the self-monitoring scale itself. However, at a genotypic level there exist one latent causal entity that is discretely distributed into two (high and low self-monitoring) and is thus a class variable (Snyder, 1987, p. 159).

It is not clear what Snyder meant by "genotypic" level. His use of the term "genotypic" might be described as equivocal. Snyder might have used the term "genotypic" in a more general sense as it was used by Lewin (1935) and Allport (1961). According to Lewin, "descriptions in terms of "*here* and *now*" are *phenotypical*. Explanatory accounts, seeking deeper dispositions, are *genotypical*. For example we may think of a person who gives gifts as a generous person. But perhaps he is merely trying to buy favor. The phenotypical disposition is bribery (not generosity), and the underlying genotype may be a kind of core feeling of insecurity in life" (Allport, 1961, p. 349).

It is also likely that Snyder used the term "genotypic" in the conventional sense as it is known to geneticists and behavioral geneticists -- particularly when he stated that people appear to be born with a biological-genetic predisposition to be high or low in self-monitoring. He further claimed that self-monitoring is largely genetic in origin and that people are born low or high in self-monitoring. The term "genotypic" refers to the underlying gene structure which through various biochemical processes and under given intrauterine and other environmental conditions, causes certain traits to develop in the individual. If Snyder is using the term "genotypic" in this sense, then his claim that self-monitoring is continuous at phenotypic level and discontinuous at genotypic level contradicts the known facts about the relationship between genotypes and phenotypes. Phenotypes are considered to be directly measurable. Their expression is influenced by both genetic and environmental factors. Genotypes in contrast are not always open for overt observation and their nature is deduced from the phenotypes. Thus, in the language of behavioral sciences, the genotypic variable is a construct, the existence of which is inferred from the study of the observable phenotypic variable. Two examples of phenotypes in man are tongue rolling and intelligence. Tongue rolling is a discontinuous trait, while intelligence is a continuous trait (Moore, 1972). Although the genes that control the development of tongue rolling are not open for observation, it is assumed that tongue rolling is discontinuous at phenotypic and genotypic levels. Its development is influenced by a single gene existing in dominant and recessive forms. Intelligence on the other hand is continuous at both levels, and its development is influenced by polygenes. It is logical to assume that self-monitoring is either continuous or discontinuous at both levels, rather than assume that it is continuous at phenotypic level and discontinuous at genotypic level.

Snyder (1987) contradicted himself when he claimed that self-monitoring was discontinuous at genotypic level and at the same time acknowledged that it was unlikely that a single gene was involved in the development of self-monitoring. He made a category mistake by treating self-monitoring as a discontinuous trait. Without reliable evidence he forced self-monitoring trait to be in the same category with the discontinuous garden pea characteristics that were discovered by Gregor Mendel (1866) over one century ago. It is doubtful whether low self-monitoring and high self-monitoring individuals fall into two distinct classes like short and tall garden pea plants. It is incorrect for Snyder to use the median to group people into into low and high self monitors and then claim that self-monitoring is a discontinuous trait. It is just like using the median height to group people into short and tall and then claim that height is a discontinuous trait. It is also incorrect to use concordance rate in self-monitoring to conclude that self-monitoring is discontinuous at genotypic level. The fact that identical twins have high concordance rate of .95 (Gangestad, 1986) does not necessarily qualify self-monitoring to be a discontinuous trait. There is high correlation between identical twins in intelligence and yet intelligence is not discontinuous both at phenotypic and genotypic levels.

In supporting the discontinuous nature of self-monitoring, Snyder and Gangestad (1985) reported that the proportion of people belonging to each of the self-monitoring classes is fixed within any sample. The proportion of people belonging to the high self-monitoring class is .41 and to the low self-monitoring class is .59. But because self-monitoring is a new construct and the Self-Monitoring Scale has not been administered to subjects from many cultures, it remains to be seen whether these proportions are fixed or not.

Snyder claimed that he used the taxometric methods developed by Meehl and Golden in 1982 to justify his classification of self-monitoring as a discontinuous variable. He reported that "taxometric methods can be applied when researchers believe that a discontinuous class variable exists and they can supply a set of indicators thought to discriminate between the two classes" (Snyder, 1987, p. 160). There are no reasons for Snyder to believe that self-monitoring is discontinuous at the genotypic level.

It appears that Snyder and Gangestad (1986) treated self-monitoring as a discontinuous trait mainly to justify the typological model which they had proposed earlier (Snyder and Gangestad, 1985). According to that model, individuals are either low or high in self-monitoring and by splitting the scores obtained on the self-monitoring scale at the median, one approximates the discontinuity that exists between the two genotypes. They explicitly stated that, it does not matter what a person's score on the trait measure is, all that matters is that the correct classification into the proper type (low or high) has been made. They further argued that how high or low one is on the self-monitoring scale is irrelevant. They emphasized that self-monitoring is a class variable. Individuals scoring high and low on self-monitoring differ not in degree, but in kind.

By proposing that people can be categorized into low or high self-monitoring Snyder became a typologist. According to Allport (1961), a typologist imposes his own interest on human nature and in his eye mankind seems to be divisible according to his scheme. Typologies are convenient and seductive ways of categorizing people and they are often derived from rational rather than empirical methods. They are often invented in the armchair and not in the laboratory. Allport observed further that typologists often run into one difficulty. The difficulty is that the very conception of "type" implies *discontinuity*. It implies that some people fit one type and others fit another. By treating self-monitoring as a discontinuous trait at least at the genotypic level, and by ignoring the existence of the "mixed type" -- people who are neither high nor low in self-monitoring -- Snyder seems to have fallen squarely into this difficulty of grouping people into two types only. Probably he ignored this difficulty because he developed an empirical method (scale) for measuring the level of self-monitoring. Theorists who are aware of this difficulty use the concept "type" without claiming that their types involve concrete personalities at all. However, they say that their typological scheme helps us to understand personalities even if no single individual person actually fits.

Most personality traits are continuous and polygenic. In fact, continuous variation is the rule rather than the exception for behavioral characters (Plomin, 1980). Eaves, Eysenck and Martin (1989) noted that most phenotypic variation in species from micro-organisms to man is continuous and that part of our inability to assign individuals to genetic categories may be due to the "smoothing effect" of the environment. Snyder's attempt to treat self-monitoring as a category variable at genotypic level creates confusion. It is probably reasonable to treat self-monitoring as a continuous trait at phenotypic and genotypic levels until proved otherwise. The existence of gradations -- low, moderate and high -- in scores obtained after administering a self-monitoring scale to a group of people attests to the continuous nature of the trait. By treating self-monitoring as a discontinuous trait Snyder implied that the development of self-monitoring trait is controlled by a single gene existing in dominant and recessive forms. There is no clue to the existence of dominant and recessive genes controlling the self-monitoring trait. It is unknown whether it is the high self-monitoring individual who is homozygous or heterozygous for the dominant gene and the low self-monitoring individual who is homozygous for the recessive gene.

In summary, it can be stated that Snyder's theory that self-monitoring is discontinuous at genotypic level and continuous at phenotypic level is untanable at this point in time. It contradicts the known facts about the relationship between the two levels. In their (Snyder & Gangestad, 1985) article entitled "To Carve the Nature at Its Joints", they argued that pyschologists have spent most of their time developing sophisticated methods for measuring the cognitive abilities which were assumed to be quantitative, and ignored the development of methods for measuring class variables. They argued further that this attitude may be responsible for a methodological inertia that created unfavorable environment for class models of personality. These are reasonable arguments but are insufficient to convince scholars that self-monitoring is discontinuous at genotypic level and continuous at phenotypic level. To prove that self-monitoring is discontinuous at genotypic level might require the isolation of the gene responsible for its development. Unfortunately Snyder is unhappy with psychological genetic studies. He stated (M. Snyder, personal communication, May 15, 1991) that psychological genetic studies "end where they begin" -- they begin with the study of identical twins and that is where they end. Unless serious genetic studies are conducted to prove that self-monitoring is really discontinuous at genetypic level, Snyder's theory will be seen for a long time to come as an argument of a typologist sitting in an armchair and trying to carve human nature into his own hypothetical types.

Relationship Between Self-Monitoring and Other Personality Variables

The original, the revised, and the abbreviated Self-Monitoring Scales have been used by different investigators to show the relationships between self-monitoring and other personality variables. Younger and Pliner (1976) conducted a study using the original Self-Monitoring Scale and they reported that obese persons have higher self-monitoring scores than normals. They postulated that the high self-monitoring score might reflect the obese individuals' "deviant" status, which forces them to monitor and control their behavior more carefully in order to achieve social acceptance.

Tunell (1980), who used the original self-monitoring scale, reported that high self-monitors had significantly larger discrepancy between their self-ratings and the ratings of them made by those acquainted to them. They studied 13 low self-monitors and 14 high self-monitors. The subjects were asked to supply the names and addresses of 10 people who knew them in various contexts. The researcher contacted the acquaintances by mail and asked them to rate the target subject on 14 personality dimensions that corresponded to those on the Jackson Personality Research Form (1974). The target subjects also made self-ratings on the same 14 personality dimensions. In defending his finding that the high self-monitors showed larger discrepancy between self-ratings and ratings by acquaintances, Tunell quoted Miller and Hogan, (1978) who reported that test-taking is a form of self-presentation and that high self-monitors concerned as they are with their self-presentation, may be high in evaluation apprehension and try "to look good" in the eyes of the researcher. It appeared that the attention of the high self-monitors was on the immediate demands of the research situation and not on their relevant past behaviors. On the other hand, low self-monitors gave self-ratings that were more consistent with past behavior as assessed by their acquaintances.

Cadwell and O'Reilly (1985) conducted a study in which they gave 92 college students the original self-monitoring scale and the Adjective Check List (Gough and Heilbrum, 1980). The List contains 300 self-descriptive adjectives. Based on the adjectives chosen, 37 scales could be computed. Fifteen of the scales measure dispositions identified as important in Murray's (1938) Need-Press theory of personality. These include the need for achievement, affiliation, exhibition, autonomy, aggression, change, heterosexuality, succorance, abasement, and deference. Principal component analysis was computed for the 15 need scales. The results showed a positive correlation between the Acting and Extraversion subscales of the Self-Monitoring Scale and Competitive Ambition and Affiliation subscales computed from the Adjective Check List. They also found a high correlation between the Succorance, Abasement, and Other-Directedness subscales. They concluded that those individuals who have an active approach toward social situations are higher scorers on the Acting and Extraversion subscales of self-monitoring; and that those who are high on needs for succorance and abasement tend to score high on the Other-Directedness scale.

Wolfe, Lennox and Hudiburg (1983) used the revised 13-item scale and reported that subjects high on the scale described their own drug use as self-initiated. This finding was contrary to what was expected.

They hypothesized that the subjects high on self-monitoring should also be high on conformity and should describe their drug use as being due to compliance and not to self-initiation. The subjects in the study were freshmen recruited during the summer orientation sessions at State University of New York. Wolfe and Lennox explained the unexpected results by stating that at the time the freshmen took the tests they were strangers to each other and were therefore likely to describe their drug use as self-initiated rather than due to the influence of others.

Snyder, Simpson and Gangestad (1986) used the original 25 item-scale and reported that high self-monitoring men are more attracted to the physical characteristics of their potential partners while the low self-monitoring men are more concerned with the psychological characteristics of their potential partners. In their study a group of college aged men who were not committed to a steady dating partner studied file folders that contained photographs and personality sketches of potential dating partners. High self-monitoring men devoted proportionately more time than low self-monitoring men to inspecting the photographs of their potential partners, while the low self-monitoring spent more time scrutinizing the personality characteristics of their potential partners. The study suggests that people initiate romantic relationships on very different bases -- exterior appearances for high self-monitors and interior qualities for low self-monitors. Low self-monitors choose romantic situations when their partners possess personally desirable inner attributes. Snyder speculated that high self-monitors can form and break relationships very quickly. On the other hand low self-monitors take longer time to form relationships and they love to stay in them. Should they break a relationship they take a very long time to get into another. Snyder and DeBono (1985) reported that higher self-monitors preferred image-oriented to quality-oriented advertising.

From these studies linking self-monitoring to other variables it is apparent that the high self-monitoring individuals are more concerned about psychological and physical appearances. They are sensitive and they like to please and to be pleased by others. It appears that they make up their minds but it never stays made because every situation they confront presents to them different demands requiring different modes of behavior. The variation of their behavior with situations explains why there is a greater discrepancy between their self-ratings and ratings of them made by others. On the other hand it is apparent that low self-monitoring individuals are less concerned with appearances but more concerned with realities and long lasting attributes. Their behavior is consistent in most if not all situations and their self-ratings are similar to ratings of them made by others. Although the Self-Monitoring Scale can be used to type individuals into high and low self-monitors, what makes some people high and others low in self-monitoring is still poorly understood,

Relationship of Self-Monitoring to Careers

Snyder (1987) reported that professional stage actors have substantially higher scores on the self-monitoring scale than comparison samples of University students. Apart from stating that expressive self-control is a meal ticket to the professional actors, Snyder did not explain the causes of differences in self-monitoring between the actors and the University students. Are the stage actors high in self-monitoring because their profession demands expressive self-control and through practice they become high self-monitors, or are they high in self-monitoring because they have the potential for expressive self-control? Suppose those who intend to become actors are tested before they join the profession, are they likely to be higher in self-monitoring than the University students? Such a study is plausible except it would be difficult to find or identify the subjects who have the potential for becoming actors.

Acting and teaching are similar in the sense that they both involve mental and emotional interaction between the participant and the listeners. They both involve drawing and sustaining the attention of the listeners. Both actors and teachers prepare their contents in advance and they use gestures and intonation to sustain the attention of the listeners. Effective actors and teachers are sensitive to emotional expression and they can "read" boredom or attentiveness in the faces of the listeners. Expressive self-control is therefore a meal ticket to the teachers as it is to the actors.

Fontana (1986) reported that successful teachers are more understanding, accommodating, warm, friendly, stimulating, and enthusiastic than the less successful ones. Fontana further stated that teaching requires mastery of one's mood. A teacher who is poor in the mastery of his mood stand a risk of inflicting on one class a rather angry mood induced in him by the earlier behavior of another class. Bloom (1983) described teaching as a multi-skilled profession. Bloom argues that teachers must think seriously about their active task entry behaviors and about the entry behaviors of the children in their classes. Before entering upon a particular lesson or upon a particular encounter with children the teacher should determine what particular active behaviors on his part are likely to obtain the best results. At times he needs to be a leader and to take the initiative. At other times he needs to keep quiet and be a good listener. At times he needs to be decisive and authoritative, at times to leave things more flexible or to encourage democratic processes. At times he needs to provide the children with clear answers to their questions, at other times he needs to be more enigmatic, and to prompt the children into finding the answers for themselves. With some children he needs to be challenging and stimulating, with others supportive and encouraging. With some children he can be trusting while with others he needs to be a little more careful. He must recognize those occasions when he can readily share a joke with the class, and those occasions when he has to be wary lest certain members of it overstep the mark. Larkin (1987) reported the existence of a relationship between self-monitoring and teaching. She reported that high self-monitoring teachers rated themselves as significantly more able than low self-monitoring teachers to change their teaching style to fit the needs of the students.

Fontana's and Bloom's descriptions of what teaching entails alludes to the high self-monitoring nature of the profession. It is therefore logical to assume that teachers are high in self-monitoring. Assuming that teachers are high in self-monitoring, testing practicing teachers in self-monitoring would tell us little about the cause of high self-monitoring in them. Is it the practice or the potential that make them high in self-monitoring? Bloom believes that the ability of the teachers to change their behaviors to conform to the demands of the situation is a professional skill which can be acquired through practice. Fontana also believes that the ability of teachers to master their moods comes only with long practice. Thus both Bloom and Fontana converge on the same conclusion that the high self-monitoring nature of teachers is largely acquired through practice. This conclusion conflicts with Snyder's contention that one is either born high or low in self-monitoring -- ruling out the possibility that a low self-monitor can turn into a high self-monitor as a result of practice. According to Snyder's belief that one is either born high or low in self-monitoring it would appear that only those born high in self-monitoring choose to go into acting and teaching professions. But according to Bloom's and Fontana's belief that the high self-monitoring ability required in teaching can be acquired through practice, low self-monitors can become high self-monitors after joining the profession.

By testing students who have just enrolled in the faculty of Education to train as teachers, it would be possible to determine their potentiality in self-monitoring. If they are found to be higher in self-monitoring than the students in other faculties -- for instance, Science then it might be tentatively concluded that those who go into the teaching profession have a higher self-monitoring potential than those who go into science based occupations.

Origins of Self-Monitoring

Synder and Gangestad (1986) claimed that the development of self-monitoring is determined largely by genetic factors. Snyder suggested that people appear to be born with a biological-genetic predisposition to be high or low in self-monitoring. At the underlying level, people come in only two kinds, the high and the low self-monitoring. People are first born then made high or low in self-monitoring. This is the most intriguing aspect of Snyder's theory. Because self-monitoring is a new concept and has not been investigated fully, one would expect him to propose that its development is influenced by both genetic and environmental factors. Snyder has categorically down-played the influence of environmental factors on the development of self-monitoring. He reported that repeated efforts using surveys and questionnaires to implicate environmental variables as predictors of self-monitoring have come up empty-handed. He concluded that, "there is no reliable evidence that self-monitoring is meaningfully associated with social class, economic status, regional origins, geographic movements or religious affiliation." (Snyder, 1987, p. 131). This conclusion contradicts the finding of an earlier study conducted by Zaidman and Snyder in 1983. They reported that most adults who scored high in self-monitoring grew up in houses with more rooms and fewe people per room. Such houses are cardinal features of middle class homes. It is therefore possible that social class as an environmental factor could influence the development of self-monitoring. Another study conducted by Hormuth and Lalli (1984) revealed that people with urban orientation score higher than those with rural orientation on self-monitoring.

Effects of Culture on Constructs Related to Self-Monitoring

If self-monitoring is really basic to human nature like other related constructs, then it should be found in all cultures. Related constructs like cognitive style and locus of control have been found to exist in all cultures at varying levels. Cognitive style is defined by a dimension which runs between poles: at one end, the field dependent style includes limited and structuring skills in perception and a sensitivity to social situations; at the other end, the field independent cognitive style include structuring and an analytic approach to perceptual and cognitive materials, distancing and limited sensitivity (Berry, 1976, p. 31). Solid evidence exists that field-dependents are more alert to social stimuli. They do better than field-independents, for example, in tasks that require the incidental memory of social words (Fitzgibbons, Goldberger & Eagle. 1965) and the memory of faces (Messick & Damarin, 1964). Groups of field-dependent males are able to achieve consensus in significantly less time than is required for field-independent groups. Field-dependents are more skilled at the art of interpersonal accommodation. Field-independents on the other hand are better able to resist the influence of others (Wallach, Kogan & Burt 1967). The descriptions of field-dependent and field-independent individuals made by Fitzgibbons et al. (1965), Messick & Damarin (1964), and Wallach et al. (1967) apply to high self-monitors and low self-monitors respectively. It thus appears that cognitive style and self-monitoring are closely related constructs. Synder (1979) reported that high self-monitoring individuals engage in perceptual and cognitive processes that direct their search for more information about other individuals.

There is strong evidence that socialization contributes to the development of cognitive style and that cognitive style covaries with culture. Goodenough and Witkin (1977) reported that those individuals raised with an emphasis on autonomy and achievement tend to be more field independent, whereas those raised in a protective or conforming milieu tend to be more field dependent. In a cross-cultural study Berry (1966) predicted that individuals who grow up in a "tight" stratified and densely populated society such as those described in agriculturally based groups, will be more responsive to group needs and more responsive to group requirements. In contrast, those developing in a "loose" social units might be expected to be more independent of authority and less conforming to group pressure. Berry tested his prediction by contrasting the hunting and fishing Eskimos in Canada and the agricultural Temne in Sierra Leone on a conformity task. He reported that the Eskimos were more field independent than the Temne, and that the Temne males were significantly more field independent than the females. In a similar study, MacArthur (1972) reported that the hunting Canadian Eskimos were more field independent than the agricultural Nsenga Africans in Zambia, and that the Eskimo males were more field independent than the females. The explanations he gave for the findings in the two studies is that the hunting and fishing groups stayed in an environment which required adaptive behavior for survival, and in such environments autonomy-fostering is emphasized in children leading to the development of field independence and self-sufficiency. MacArthur (1972) also explained that the sedentary agricultural environments demanded for conformity to climatic patterns and agricultural practices, leading to the development of field dependence and inflexibility in children. He also explained that the firm control of women observed in both the Eskimo and Nzenga cultures, leads to the proposition that field dependence in women may be largely a function of social role influences.

Social traditionism has been investigated in cross-cultural studies, and has been shown to be a variable contributing to the development of cognitive style. Among the studies which carried "traditionism" as a theme is that of Preale, Amir and Sharon (1970) which compared young Israel adults of Middle-Eastern origin and Western ethnic origin. The Middle Eastern family was characterized by Preale et al. as more tradition oriented, having an authoritarian patriarchal structure which tends to foster subordination to authority and restriction of emotional autonomy. The results of their study showed that the Middle-Eastern group was more field dependent than the Western group.

In another study Rand (1971) reported that Jewish children of Moroccan origin were more field dependent than the Jewish children of European origin. The Jewish Moroccan family was characterized by Rand as authoritative and patriarchal. Strict obedience to paternal authority is expected and the mother with whom the child has a dependent relationship is cast in a protective role. Corporal punishment is readily used as a form of punishment and initiation by the child is discouraged. Conformance to authority is also strongly emphasized in school and in religious practices. Rand's description of the Jewish Moroccan family applies to the Kenyan family.

If cognitive style, which is more mental in nature, is influenced by culture as indicated by Rand's and Preale et al.'s studies, it is logical to argue that self-monitoring which is more social in nature is influenced more by culture. It is therefore likely that the Jewish Moroccan children could differ in self-monitoring as compared with Jewish European children.

Studies have shown that there are cultural differences in the locus of control. Rotter (1966) defined locus of control as individuals generalized expectancy of their degree of control over what happens to them. He postulated two possible control states -- internal and external. Individuals who possess an internal locus of control perceive events as contingent upon their own behavior. Conversely individuals who possess an external locus of control perceive events as being unrelated to their own behavior and determined by such external sources as chance, luck and fate. Hsieh, Shysut, and Lotsof (1969) reported that Anglo-Americans were more internal than American-Chinese who were more internal than the Chinese living in Hong Kong as measured by Rotter's I-E scale (1966). The differences were attributed to Chinese cultural values, which it was claimed lead to a view of life as unpredictable and dependent on luck or fate or chance as contrasted with American values which emphasized control and self-reliance. In another study Carment (1974) showed that the Canadians were more internal in control than Indians. He concluded that internal individuals are likely to have approving non-rejecting parents and that Indians have a marked reluctance to reward behavior in their children. In Kenya the needs of the children are subordinate to the needs of the parents and the parents are reluctant just like the Indians parents to overtly reward their children, because of their belief that rewards spoil children.

Recent attempts to correlate locus of control to self-monitoring have produced unexpected results. Blustein (1987) postulated that internal individuals are low self-monitors and that external individuals are high self-monitors. His results showed that there was no significant correlation between locus of control and self-monitoring. In a similar study Hamid (1989) reported a low positive correlation of .17 between locus of control and self-monitoring. The general conclusion drawn by Blustein and Hamid is that perhaps the social cognitive dimensions assessed by the two constructs are quite distinct and yet they appear related at superficial level. Hamid further observed that high self-monitors with internal locus of control tend to display behavior congruent with their attitudes and are more confident about their own needs and they respond to others appropriately. Lack of significant correlation between locus of control and self-monitoring does not necessarily rule out the possible influence of culture in the development of self-monitoring. The two constructs could be uncorrelated, yet both be influenced by cultural factors.

Snyder's Support of Genetic Origin of Self-Monitoring

Although Snyder has down-played the influence of environmental factors on self-monitoring, he has not cited sufficient evidence to support his claim that self-monitoring is largely genetic in origin. He quoted two unpublished papers authored by Dworkin (1977) and Gangsted (1986) to support his claim. Dworkin presented a paper on *genetic influences on cross-situational consistency* at the Second International Congress on Twin Studies. In his paper he claimed that the within pair variability on the self-monitoring scale for identical twins was less than half the within pair variability for fraternal twins. Gangestad reported in his dissertation that the concordance rate of identical twins is .95 and fraternal twins .74 on self-monitoring. Because the two sources quoted by Snyder have not been published and therefore have not been scrutinized by independent scholars, their authenticity in supporting genetic origin of self-monitoring remains questionable.

In his support for the biological-genetic origin of self-monitoring, Snyder further argued that the potentiality to become a low or high self-monitor can be recognized in children at an early age. Using Nelson's (1981) classification system, children at the age of one and half years can be identified as referential or expressive. Referential children acquire language as a system for conveying information about events in the world. Expressive children on the other hand acquire language as a social vehicle for capturing the attention of others. Snyder argued that referential and expressive linguistic styles are early forms of self-monitoring. According to him referential children and low self-monitoring adults are rather insensitive to social context, whereas expressive children and high self-monitoring adults are highly attentive to such considerations. Snyder's correlation of linguistic styles to self-monitoring is purely speculative; there is no longitudinal study which has shown that referential children become low self-monitors and that expressive children become high self-monitors at adulthood.

Without sufficient evidence, Snyder's claim that self-monitoring is largely genetic and therefore different from other personality variables is questionable. Snyder implied that there are "social genes", the genes that make high self-monitors more sensitive to social cues, and "attitudinal genes", the genes that make low self-monitors more dependent on their inner states for behavioral regulation. There is no evidence that such genes exist. He also indirectly suggested that low and high self-monitors differ in a specific body metabolism related to self-presentation and sensitivity to others' behavior. Genes are segments of DNA that code for protein synthesis. They do not have direct effects on behavior. They affect behavior indirectly in the same way that they affect any phenotype, that is by controlling the production of specific enzymes (Plomin, 1980). Thus if self-monitoring is genetic then there must be a specific metabolism or protein synthesis associated with it, such that either low or high self-monitoring individuals are deficient in the metabolism. To date such a metabolism or its deficiency is not known, although Gangestad (1986) speculated that there is a specific biochemical pathway associated with self-monitoring.

In the absence of evidence supporting full genetic influence, the search for the factors that contribute to the development of self-monitoring trait should begin with the exploration of the environmental factors. According to Plomin and Daniels (1987) recent behavioral-genetic research converges on the conclusion that most behavioral variability among individuals is environmental in origin. Behavioral-genetic research seldom finds evidence that more than half of the variance for complex behavioral traits is due to genetic differences among individuals. This is contrary to Snyder and Gangestad position that self-monitoring is largely genetic. Plomin and Daniels also observed that, "research converge on the remarkable conclusion that environmental influences on personality, psychopathology, and cognition make two children in the same family as different from one another as are pairs of children selected randomly from the population" (Plomin and Daniels, 1987, p. 1).

Influence of Culture on the Origin of Self-Monitoring

Synder (1987) underrated the effect of environmental factors on self-monitoring, although he appeared conscious of the possible influence of the cultural factors on the development of self-monitoring. He noted, when he was referring to Benedict's (1967) characterization of Japanese life as full of rules, that "a society that places such a high value on rule following may also be one with a corresponding large proportion of high self-monitors in it" (Synder, 1987, p. 11). He further noted that in such a society people develop high awareness of the social world and therefore display a high amount of self-monitoring. He implied that there would be a large proportion of high self-monitors in Japan. A recent study by Gudykunst, Yang, and Nishida (1987) has shown that Snyder was wrong when he speculated that a society with many social rules like Japan has a high proportion of high self-monitors. Gudykunst et al. compared the Americans, the Japanese and the Koreans in self-monitoring. They reported that the Americans were significantly higher than the Japanese and the Koreans in self-monitoring. Other studies conducted in United States by Frazier and Fatis (1980), and by Sullivan and Harnish (1990) have reported that the males are significantly higher than the females in self-monitoring. The findings of these studies prove that the effects of cultural or environmental factors on the development of self-monitoring are significant and cannot be underrated as Snyder did.

Social world awareness and rate of social interaction has been shown to covary with culture. A cross-cultural study conducted by Earley (1984) showed that the rate of social interaction between the supervisors and the employees in tyre manufacturing factories was highest for the Ghanaians, followed by the Americans, and then the English. The English workers did not value social interactions as much as the Ghanaians and the Americans did. Earley concluded that the rate of social interaction is culturally influenced. If the rate of social world awareness or the rate of social interaction is an indicator of the level of self-monitoring as was alluded to by Synder, then it is logical to conclude that there would be a larger proportion of high self-monitors in Ghana than in America or in Britain. On the basis of demographic factors, it can be assumed that the Canadian culture is more similar to that of the Americans and that the Kenyan culture is more similar to that of the Ghanaians. It can then be hypothesized that there would be a larger proportion of high self-monitors in Kenya than in Canada.

Synder (1987) reported that differences in mannerism of various ethnic, national, and religious groups are often used to interpret their expressive behavior. He quoted Barzini who acutely observed that "Italy is full of actors, fifty million of them, in fact, and they are almost all good; there are only a few bad ones and they are on the stage or in the films" (Barzini, 1967, p. 62). Synder reported that "professional stage actors, for whom expressive self-control is a meal ticket, have substantially higher scores on the self-monitoring scale than the comparison samples of university students" (Synder, 1987, p. 21). Because Italy is full of actors and actors score high on the self-monitoring scale, it can be deduced that Italy has a large proportion of high self-monitors. Such a conclusion alludes to the possible cultural influence on the development of self-monitoring.

In summary it can be stated that the origins of self-monitoring are not fully understood. There are no sufficient data to support Snyder's belief that self-monitoring is largely genetic in origin. The finding by Gudykunst et al. (1987) that the Americans were significantly higher than the Japanese and the Koreans in self-monitoring, and the findings by Frazier and Fatis (1980), and by Sullivan and Harnish (1990) that males were significantly higher than the females in self-monitoring clearly implicate the influence of cultural factors on the development of self-monitoring. The development of constructs related to self-monitoring -- like cognitive style and locus of control have been shown to be influenced by cultural factors. It is therefore logical to assume that the development of self-monitoring is also influenced by cultural factors. Considering the fact that there are no sufficient data to support Snyder's claim that the origin of self-monitoring is largely genetic in origin and the fact that Gudykunst et al. showed that there was cultural differences in self-monitoring, it would be reasonable to conclude that the development of self-monitoring could be influenced by both genetic and cultural factors.

Research Questions

A review of the related literature reveals that more research needs to be done on the development of self-monitoring. The factors that influence the development of self-monitoring in individuals are still poorly understood, and Snyder's (1987) tentative conclusion that the development of self-monitoring is largely genetic in origin appears to be premature, in light of the fact that the effects of environmental factors on the development of self-monitoring have not been fully investigated. The questions posed in this study were based on the fact that the development of self-monitoring is not yet fully understood. This study addressed the following questions:

1. Does the Self-Monitoring Scale measure the same constructs or factors in United States, in Canada, and in Kenya?
2. Is there any significant difference between subjects from two distinct cultures in self-monitoring?
3. Is there any significant difference between females and males in self-monitoring?
4. Is there any significant difference between rural dwellers and urban dwellers in self-monitoring?
5. Is there any relationship between the level of self-monitoring and career choice?

Research Hypotheses

Four specific hypotheses were tested in this study. These were:

Hypothesis One

The Kenyan students at Kenya Technical College would achieve higher scores in self-monitoring than the Canadian students at the University of Alberta.

This Hypothesis was partly based on the observation that children brought up in a more traditional culture like Kenya are trained to respect and to conform to the demands of the adults, including parents. A culture in which conformity is emphasized is more likely to produce high self-monitors because there is a lot of pressure on children to observe and obey the social norms. On the other hand, in a western culture like Canada where conformity to the demands of the adults is less emphasized and the individuality of children is respected, is likely to have a high proportion of low self-monitoring individuals. It was also partly based on Snyder's (1987) report that cultures with many rules like Japan are likely to have a high proportion of higher self-monitoring individuals.

Hypothesis Two

Female subjects would obtain higher scores in self-monitoring than the male subjects.

This Hypothesis was formulated before the literature reproting the difference between males and females in self-monitoring was reviewed. It was based on the assumption that in the male-dominated society, women are expected to conform to the norms of the society and they are expected to be more caring and people-oriented rather than instrumental. Women are therefore more likely to be keen in studying the demands or the expectations of the situation before acting and thus likely to be higher in self-monitoring as compared with men who are expected by the society to be independent and instrumental.

Hypothesis Three

The Canadian students and the Kenyan students who have lived most of their lives in the rural environments would be higher than the Canadian students and the Kenyan students who have lived most of their lives in the urban environments in self-monitoring.

This Hypothesis was based on the assumption that the social patterns of behavior in the rural areas are more collectivistic, calling for high self-monitoring, while social patterns of behavior in the urban centers are more individualistic, hence calling for low self-monitoring.

Hypothesis Four

The Canadian subjects in the Faculty of Education training as teachers would obtain higher scores in self-monitoring than the Canadian subjects in the faculties of Science and Arts training to join science based careers.

This Hypothesis was based on the assumption that teaching is a high self-monitoring profession and that science based careers are low self-monitoring professions. It was further assumed that the students who opted for teaching profession were higher in self-monitoring than those students who opted for science-based professions.

CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

This chapter gives a detailed report on the design of this study. It reports on the population involved and the descriptive variables of the subjects involved and how the subjects were recruited into the study. It describes the instruments used in the study. Finally it outlines the inferential statistics used in the data analysis, stating clearly why they were chosen.

Overview of the Research Objectives

One of the major objectives of the study was to investigate the construct validity of the 18-item Self-Monitoring Scale as used in cross-cultural studies. This objective was achieved by reporting the factor congruence between the factor loadings obtained by Snyder and Gangestad (1986/1991) and the factor loadings obtained from my Canadian and Kenyan subgroups in this study. The other major objective of the research was to investigate the effect of culture on self-monitoring. This was done by comparing the mean scores of subjects from two distinct cultures -- namely Kenyan and Canadian. The third objective of the study was to investigate whether there is sex a difference in self-monitoring. The fourth objective was to investigate whether there is an environmental effect on self-monitoring. This was done by comparing the mean score of the individuals who have lived most of their lives in the rural areas to the mean score of the individuals who have lived most of their lives in urban areas. The final objective of the study was to investigate the relationship between the level of self-monitoring and career interest. This was done by comparing Canadians interested in teaching to Canadians interested in science based careers in self-monitoring.

Design of the Study

The study was causal comparative and it attempted to establish connections between culture, sex, environment, career interest, and self-monitoring. Culture, sex, and career interest were the independent variables while self-monitoring was the dependent variable. The Kenyan and the Canadian subjects who were involved in the study were similar in age and educational background. Canadian subjects having different career interests were involved.

Population and Sample

Kenyan and Canadian populations were involved in this study. The Kenyan population was chosen simply because I am a Kenyan and could therefore easily obtain a sample from the Kenyan population for the study. The Canadian population was involved in the study because I was a foreign student in Canada at the time this study was conducted.

The Kenyan sample comprised students at Kenya Technical College in Nairobi. All students at Kenya Technical College train to become teachers. Over two hundred first year students in education courses were approached by their instructor for voluntary participation in the research. Two hundred of them accepted and completed the research instruments. The instructor who approached them about the study was a colleague of mine. The researcher made prior arrangements with the instructor about the administration of the research instruments to his students. The instructor cordially accepted to participate as a research assistant to researcher. Of the two hundred subjects who responded, only 151 were included in the final sample. The other responses were eliminated either because they did not respond to all the 18 items in the Scale or because they not indicate in the Biographical Form that they were interested in teaching as a career or because they indicated in the Biographical Form that they had stayed out of Kenya for more than one year. These measures were taken in order to avoid any bias that could have been introduced into the study by the scores of those subjects who responded to less than 18 items in the Scale, by the scores of those subjects who were not interested in teaching, and by the scores of those subjects who have stayed out of Kenyan for more than one year.

The Canadian sample comprised students in the Faculty of Education, the Faculty of Science, and in the Faculty of Arts at the University of Alberta. Students in education, physics, and psychology courses were tested. All students in these courses were requested to participate willingly in the study, but only the scores of those subjects whose native language was English, who were interested in teaching, or in science based careers, who had not lived out of Canada for more than one year, and who responded to all the 18 items in the Self-Monitoring Scale were analyzed. These measures were taken to eliminate any bias that could have been introduced into the study by the scores of those subjects who have recently immigrated into Canada, by the scores of those subjects who are not interested in either teaching or science based careers, and by the scores of those subjects who responded to less than 18 items in the Scale. A total of 307 Canadian subjects were included in the final sample.

Instrumentation.

The 18-item Self-Monitoring Scale developed by Synder (1986) was used in this study. The Scale is presented in Table 1.

Table 1

The 18-Item Self-Monitoring Scale

Item No.	Stem
1.	I find it hard to imitate the behavior of other people.
2.	At parties and social gatherings, I do not attempt to do or say things that others will like.
3.	I can only argue for ideas which I already believe.
4.	I can make impromptu speeches even on topics about which I have almost no information.
5.	I guess I put on a show to impress or entertain others.
6.	I would probably make a good actor.
7.	In a group of people I am rarely the center of attention.
8.	In different situations and with different people, I often act like very different persons.
9.	I am not particularly good at making other people like me.
10.	I'm not always the person I appear to be.
11.	I would not change my opinions (or the way I do things) in order to please someone or win their favor.
12.	I have considered being an entertainer.
13.	I have never been good at games like charades or improvisational acting.
14.	I have trouble changing my behavior to suit different people and different situations.
15.	At a party I let others keep the jokes and stories going.
16.	I feel a bit awkward in company and do not show up quite as well as I should.
17.	I can look anyone in the eye and tell a lie with a straight face (if for a right end).
18.	I may deceive people by being friendly when I really dislike them.

For information on administration and scoring, see Snyder (1987). Items are keyed in the direction of high self-monitoring (T=true; F=false).

The 18-item Self-Monitoring Scale is an abbreviated version of the original 25-item Self-Monitoring Scale developed by Snyder in 1974 in United States. By pruning 7 items from the original scale Snyder improved the reliability of the revised scale. The 18-item Scale has an internal consistency (Cronbach Coefficient alpha) of .70 and a one month test-retest reliability of .83.

Cronbach (1951) introduced the term Coefficient alpha (α) to represent the internal consistency of the test. Coefficient alpha indicates how well the items are measuring a single variable. It permits an efficient estimation of the reliability from a single administration of the test. It is an index of how well the observed scores are close to the true scores. Cronbach's Coefficient alpha was used to estimate the internal consistency or the reliability of the 18-item Self-Monitoring Scale for the subgroups involved in the study. In my study, the SPSSx computer program was used to calculate the internal consistency of the 18-item Self-Monitoring Scale for the Canadian and the Kenyan subgroups. The internal consistency of the Scale for the Canadian Subgroup (N=307) was .71, while that for the Kenyan subgroup (N=151) was .66. The coefficients obtained show that the reliabilities of the Self-Monitoring Scale in the American, in the Canadian, and in the Kenyan subgroups were quite similar.

Snyder and Gangestad (1986) reported after testing a total of 1918 subjects in the United States that the scale has a mean of 9.59 and a standard deviation of 3.42. According to Snyder (1987), it is the best scale available for measuring self-monitoring. The other available measure is the 13-item Self-Monitoring Scale developed by Lennox and Wolfe (1984). Snyder as the authority in self-monitoring has criticized

Lennox and Wolfe Scale for its narrowness. He reported that many of the items in the Scale are restatements and that restatements increase reliability due to correlated error components rather than due to increments in validity.

A 13-item Biographical Form (see Appendix i) constructed by me was used in conjunction with the 18-item Self-Monitoring Scale in data collection. A pilot study showed that the items in the Scale and in the Form were simple and understandable to the subjects.

Procedure

Two instruments were used in data collection -- the 18-item Self-Monitoring Scale and the 13-item Biographical Form. All participants read and signed the informed consent letter (see Appendix ii) before completing the Scale and the Form. The subjects completed the Scale first. It took the participants about 40 minutes to complete the Scale and the Form.

The Scale, the Form, and the informed consent letter were air-mailed to an instructor in the Department of Education at Kenya Technical College. The instructor was my colleague at Kenya Technical College before I came to Canada for graduate studies. I made prior arrangements with the instructor about the study. A set of instructions to follow in the administration of the instruments were also sent to him. The instructor administered the instruments to the subjects in a lecture hall. He then air-mailed the completed instruments and the signed informed consent letters to me in Edmonton.

In Canada the instruments were administered to the students in the faculties of Education, Science, and Arts at the University of Alberta with the consent of the instructors and by the teaching assistants. The researcher made prior arrangements with the instructors and teaching assistants about the administration of the instruments to students in their courses. The participants read and signed the informed consent letter before completing the Scale and the Biographical Form.

Data Analysis

The data were analyzed using the SPSSx program. The scores of the subjects on the 18-item Self-Monitoring Scale and their responses on the items in the Biographical Form were manually coded by me and then accurately transcribed into a computer file by a research assistant employed by the Department of Educational Psychology. With the assistance of a consultant in Educational Measurement Section, I wrote the command files which were used to analyze the raw data. The .01 level of significance was used for the statistical tests.

The missing data were treated as follows. Any subject who did not respond to all of the items in the Self-Monitoring Scale was deleted from the analyses. Thus, only the subjects who responded to all of the 18 items in the Scale were included in the final sample.

Exploratory factor analysis and confirmatory factor analysis were conducted in order to determine whether or not the Self-Monitoring Scale measured the same constructs or factors in both the Kenyan and Canadian subjects.

In testing Hypothesis 1, that the Kenyans would be higher than the Canadians in self-monitoring, a 2 x 2 (Culture by Sex) analysis of variance (ANOVA) was used. This method of analysis was chosen so that the differences in self-monitoring due to culture and sex could be tested simultaneously.

This hypothesis was explored further by decomposing the Self-Monitoring Scale into two subscales identified by Briggs and Cheek (1988) -- Public Performing and Other-Directedness. Items 1, 3, 4, 7, 12, 13, 15 and 16 formed the subscale measuring Public Performing; while items 5, 8, 10, 16 and 18 formed the subscale measuring Other-Directedness. A 2 x 2 (Culture by Sex) ANOVA was used to compare the Canadians and the Kenyans on Public Performing and on Other-Directedness.

Hypothesis 2, that the female subjects would be higher than the male subjects in self-monitoring, was tested together with Hypothesis 1, using a 2 x 2 (Culture by Sex) ANOVA.

In testing Hypothesis 3, that the Canadians and Kenyans who have lived most of their lives in the rural environments would be higher than the Canadians and Kenyans who have lived most of their lives in the urban areas, a 2 x 2 x 2 (Environment by Culture by Sex) ANOVA was used in the analysis.

In testing Hypothesis 4, that the Canadian students interested in teaching would be higher than the Canadian students interested in science based careers in self-monitoring, a 2 x 2 (Career by Sex) ANOVA was used in the data analysis. The hypothesis was explored further by decomposing the scale into two subscales -- measuring Public Performing and Other-Directedness. A 2 x 2 (Career by Sex) ANOVA was used to compare the subjects in Public Performing and in Other-Directedness.

CHAPTER IV

RESULTS

This chapter reports the analysis of data pertinent to the appropriateness of the Self-Monitoring Scale for Canadians and Kenyans and to the four hypotheses stated in chapter II. The reporting of the results, follows a consistent format: a restatement of the hypothesis, after which the pertinent statistics and appropriate conclusions are presented.

Demographics of the Subjects

The demographic description of all the subjects involved in the study is presented in Table 2.

Table 2

Demographic Description of Subjects

	Canadian		Kenyan	
Sex	N	%	N	%
Males	125	40.7	75	49.7
Females	182	59.3	76	50.3
Total	307	100.0	151	100 0

All the Kenyan subjects were Education students training to become teachers. The Canadian subjects were drawn from three different courses: Education (n=148), Physics (n=84) and Psychology (n=75). A 2 x 2 (Class by Sex) ANOVA was conducted in order to find out whether there was any significant mean score difference among the students from the three different courses in self-monitoring. The mean scores are presented in Table 3.

Table 3

Self-Monitoring as a Function of Course and Sex

	Males	Females
Education	11.2	9.8
Physics	10.5	9.3
Psychology	10.2	8.7

The analysis of variance indicated that there was no significant course effect, *F*(2, 306) = 2.24, n.s.. The analysis of variance also indicated a significant sex effect, *F*(1, 306) = 11.53, $p < .001$, but there was no significant interaction between course and sex in self-monitoring, *F*(2, 306) = .05, n.s.

Because the ANOVA showed that there was no significant difference in self-monitoring among students from the three courses and that there was no interaction between course and sex in self-monitoring, the students from the three courses were treated as one group (N=307) in the remaining analyses.

Construct Validity of the Self-Monitoring Scale for Canadians and Kenyans

Factor analysis was the primary statistical technique used in this study to investigate the construct congruence between the factors reported by Snyder and Gangestad (1986) and the factors obtained from my Canadian and Kenyan subgroups. The factor loadings reported by Snyder and Gangestad were used as the model against which factor loadings obtained from the Canadian and the Kenyan subgroups were compared.

Overview of Factor Analysis.

Kerlinger (1979) describes factor analysis as the queen of the analytic methods because of its power, elegance, and closeness to the core of scientific purpose. He defined factor analysis as follows:

> an analytic method for determining the number and the nature of the variables that underlie larger number of variables or measures. It tells the researcher, in effect what tests or measures belong together - which ones virtually measure the same thing, in other words, and how much they do so....(p. 180)

The underlying variables he refers to are called "factors". A factor is not a real entity, but a construct, a hypothetical entity, or a latent variable that is assumed to underlie items, scales, tests, and measures of any kind. The major objective of factor analysis is to reduce an original large set of variables into a derived small set of variables that can explain the common variance of the items and that can be easily interpreted. In other words factor analysis attempts to establish what scale items have in common with each other. Factor analysis can be conceived as a construct validity tool (Kerlinger, 1979). In this study factor analysis was used to provide insights into the question: Does the Self-Monitoring Scale measure the same constructs in the Canadian subjects and in the Kenyan subjects?

Types of Factor Analysis

There are two common forms of factor analysis: principal component analysis (or component analysis) and common factor analysis (or factor analysis). Principal component analysis is designed to maximize variance of a large set of variables in a small number of components and allocate most of the variance to the first unrotated factor. Principal component analysis attempts to explain all the variance on a test, including error variance. According to Mulaik (1972), principal component analysis is not truly factor analysis, although it falls in the general rubric of factor analysis. It is a simple transformation of original variables into a new set of derived variables involving simultaneous equations and the roots obtained from the solutions are called eigenvalues. Common factor analysis on the other hand uses algebraic and statistical solutions to reduce a large set of variables into a simple structure, thereby attempting to establish what a set of test items have in common with each other.

Principal component analysis and common factor analysis are generally employed for the same purposes. Velicer (1977) has shown that the two approaches result in essentially equivalent solutions. Velicer, Peacock, and Jackson (1982) suggested that the results of various factor procedures generally are indistinguishable, provided the correct number of factors are extracted. Zwick and Velicer (1982) reported that the principal component analysis is the most widely used of these two general approaches.

The principal axis factor (PAF) analysis used by Snyder and Gangestad (1986) and also used in this study is a form of common factor analysis. When the factors are represented by the principal axes, each successive one contributes a decreasing amount to the communality. In other words, the first principal factor accounts for the maximum possible variance; the second factor accounts for a maximum in the residual space excluding the first factor; and so on until the last common factor accounts for whatever communality remains. Snyder and Gangestad used the unrotated principal axis factor analysis because they believe that rotation to simple structure as is commonly done in factor analysis is unlikely to be meaningful if the items being factor analyzed were intended to load on a single factor (Catell, 1978).

Rotation Methods: Orthogonal and Oblique

Factor analysis often involves rotation of the factors. Rotation involves two options, the orthogonal (or rigid) and the oblique, and subsumed under these two types are a number of possible variants. The orthogonal procedures are rigid in the sense that the orthogonality (unrelatedness) of the components is maintained for the rotated factors. This is so because the angles of the axes involved in the rotation are maintained at right angles, and when the Cartesian coordinates are plotted the angle between the two factors is 90 degrees. The orthogonal rotation thus results in factors that are uncorrelated or independent of each other.

According to Gorsuch (1983), varimax is probably the best of the available orthogonal rotations. The procedure tends to minimize the complexity of the variables and to maximize factor loadings across columns. Varimax rotation was designed by Kaiser (1960) to clean up the factors and it is therefore used when one believes that the scale is measuring a number of unrelated factors. When this procedure is used, each factor tends to load high on a small number of items and very low on other items.

The oblique rotation on the other hand results in factors that are correlated. In oblique rotation, factor axes are allowed to form acute or obtuse angles (Kerlinger, 1979). When plotted on a Cartesian coordinate, the angle between the factors can be more or less than 90 degrees. They are much more difficult to analyze than the orthogonal rotation because two types of matrices, pattern and structure must be examined in order to interpret data.

Methods of Factor Analysis Used by Other Self-Monitoring Researchers

Using varimax rotation, Briggs et al. (1980) showed that the 25-Self-Monitoring Scale measured three uncorrelated factors, which they named Extraversion, Acting, and Other-Directedness. Snyder and Gangestad (1985) used oblique factor analysis and reported that the 25-item Self-Monitoring Scale was measuring three correlated factors. They reported that the three factors are positively correlated to the first unrotated factor and that the three factors define three content domain areas that discriminate the high self-monitoring class from the low self-monitoring class. Without reporting the items that loaded significantly on each of the three factors, Snyder and Gangestad claimed that the three factors they extracted were similar to the three factors Briggs et al. extracted by using the orthogonal rotation factor analysis. They called one of the content domain areas (or factors) Expressive Self-Control. According to them this content domain area corresponds to the Acting factor as reported by Briggs et al. They called the second content domain area Social Stage Presence -- corresponding to Extraversion factor. They called the third content domain area Other-directed Self-Presentation -- corresponding to Other-Directedness factor. Because Snyder and Gangestad believe that the Self-Monitoring Scale is measuring correlated factors, they used the oblique rotation method in their factor analysis. They overlooked the fact that oblique rotation factor analysis is more difficult to analyze than the orthogonal rotation because two types of matrices, pattern and structure must be examined in order to interpret the data. Some researchers object to oblique rotation of factors because of the possible difficulty of comparing factor structure from one study to another (Altemeyer, 1981).

Exploratory and Confirmatory Factor Analysis

There are two main uses of factor analysis, these are exploratory and confirmatory (Kim and Mueller (1976). Exploratory factor analysis is a way of ascertaining the minimum number of hypothetical constructs or factors that can account for the observed covariation. It is also a means of exploring the data for possible data reduction, and is usually used to learn the factors underlying a set of variables or measures. Confirmatory factor analysis on the other hand is a means of testing specific hypotheses. In confirmatory factor analysis one sets up a model that reflects aspects of a theory, and then somehow see whether the model fits the observed data. In my study, I assumed that if self-monitoring is a human trait then it should be expressed in all cultures and that the factor loadings obtained in the American, the Canadian, and the Kenyan cultures should be similar. Factor loadings obtained by Snyder and Gangestad (1986/1991) from their American sample acted as the model against which I fitted the factor loadings I obtained from my Canadian and Kenyan samples.

Factor Analysis of My Data

The number of subjects involved in my study was sufficient for factor analysis. A general rule stated by Gorsuch (1983) is that factor analysis can only be conducted if the ratio of subjects to items is equal to or greater than 5:1 and the number of individuals must not be less than 100 for any factor analysis. In this study the smallest group of subjects involved in factor analysis was 151 and the number of items in the scale was 18; this gave subject to item ratio of 8:1, which is greater than the absolute minimum ratio required for factor analysis.

In this study two unrotated factors were extracted using the Principal axis factor analysis procedure. The procedure was used simply because it was the one used by Snyder and Gangestad, and their loadings were the model against which the loadings obtained in this study were fitted. The factor structure extracted in 1991 from the Snyder and Gangestad (1985/1986) data was used as the model against which the factor structures obtained from the Canadian and the Kenyan subgroups were fitted. Snyder and Gangestad (1986) used the unrotated principal axis factor analysis and extracted three unrotated factors. In their article they reported the loadings of the 18 items on the Self-Monitoring Scale on the first unrotated factor. Attempts to obtain their loadings on the other two factors were fruitless. In 1991 I requested from Snyder the loadings of the three unrotated factors that they extracted in 1986, so that I could compare them to the loadings I got in this study. He stated (M. Snyder, personal communication, May 10. 1991) that the scale was measuring only two factors, and he asked Gangestad to rerun Principal Axis Factor Analysis procedure using their 1985/1986 data -- extracting only two factors instead of three. Gangestad sent to me through Snyder the loadings of the two unrotated factors (see Appendix vii).

In terms of factor structure of the Self-Monitoring Scale, Snyder and Gangestad have become the disciples of Briggs et al. (1980, 1988). It appears that in 1991 they were only willing to extract two factors because Briggs and Cheek (1988) used unrotated Principal axis factor analysis, and their examination of the eigenvalues using the Scree test showed that two factors accounted for the bulk of the common variance. They reported that the 18-item Self-Monitoring Scale was measuring two factors -- namely Public Performing and Other-Directedness. According to Briggs and Cheek's study, eight items had loadings greater than .30 on the first factor (Public performing). Items 1, 3, 4, 7, 12, 13, 15 and 16. Five items loaded above .30 on the second factor (Other-directedness). Items 5, 8, 10, 16, and 18. Item 16 loaded significantly on the two factors. Briggs and Cheek concluded that the revised 18-item Scale was measuring two General Factors A and B -- Public Performing and Other-Directedness respectively. They also concluded that the method of rotation had little impact on the matrix of factor loadings; oblique, varimax and quartimax rotations produced virtually identical results. Because Gangestad did not name the two factors he extracted, I assumed in my study that Snyder and Gangestad's two factors correspond to the two factors extracted by Briggs and Cheek (1988).

After extracting the two unrotated factors from the Canadian and Kenyan subgroups, the next task was to determine the factorial similarity between them and those obtained by Snyder and Gangestad. Determination of factorial similarity is a confirmatory factor-analytic procedure -- aiming at relating the factor pattern of the first study to those of the second study. In my study, confirmatory factor analysis was used to test the hypothesis that there is no difference between the Snyder and Gangestad's factor loadings and the factor loadings obtained from the Canadian and the Kenyan subgroups. Factorial similarity is measured by the coefficient of congruence. The coefficient of congruence was developed by Tucker (1951) to study the agreement between the factors in two studies. It was developed to relate factors when only loadings are available. It is a measure of the degree of factorial similarity. According to Harman (1976) factorial similarity is a matter of degree rather than coincidence. The coefficient of congruence can range in value from +1.00 for perfect agreement (or -1.00 for perfect inverse agreement) to zero for no agreement whatsoever. Tucker accepts coefficients ranging from .99 down to .93 as defining congruent factors, but rejects a value of .45 as "definitely low so that this factor will not be considered as a congruent factor" (p. 19).

The definitional formula of Coefficient of Congruence is as follows:

$$C_{12} = \frac{\sum Pv_1 \; Pv_2}{\sqrt{\sum Pv_1^2} \; \sqrt{\sum Pv_2^2}}$$

> Where C_{12} is the Coefficient of Congruence between factor 1 and factor 2, Pv_1 are the factor loadings for the first factor, and Pv_2 are the factor loadings for the second factor. (Gorsuch, 1983, p. 285)

In my study factor 1 referred to the relevant factor in Snyder and Gangestad's data and factor 2 referred to the relevant factor of my Canadian subgroup or the relevant factor of my Kenyan subgroup.

Tucker recommended that each factor of one study be compared with all the factors of the other study, and be paired with the one with which it has the highest coefficient of congruence.

Skakun, Precht and Maguire (1970) developed a computer program to calculate Tucker's Coefficients of Congruence. The program, which is called *"Orthogonal Factor Match"*, assesses the degree of similarity between factors of two studies. The program was used in this study to determine the Coefficients of Congruence between Snyder and Gangestad's factor loadings and those obtained from my Canadian and Kenyan subgroups.

Results of My Factor Analysis

The loadings of the two unrotated factors extracted by Gangestad and the loadings of Kenyan and Canadian subgroups obtained in my study are presented in Table 4.

Table 4

Snyder and Gangestad's Unrotated Factor Loadings and My Canadian and Kenyan Unrotated Factor Loadings

Item No.	Factor 1			Factor 2		
	Snyder's	Canadian	Kenyan	Snyder's	Canadian	Kenyan
1.	.40	.33	.29	.07	.12	-.11
2.	.18	.07	.48	.14	.09	.16
3.	.25	.24	.22	.09	.06	-.27
4.	.40	.44	.23	.03	-.17	-.01
5.	.46	.47	.32	.31	.29	.25
6.	.57	.62	.50	-.02	.11	.23
7.	.47	.59	.46	-.19	-.08	-.04
8.	.22	.17	.15	.46	.66	.13
9.	.28	.32	.46	-.21	-.21	-.10
10.	.19	.15	.18	.44	.59	.45
11.	.14	.04	.23	.21	.35	.02
12.	.41	.44	.37	.03	.02	.02
13.	.50	.54	.52	-.17	-.20	.11
14.	.33	.37	.41	.04	.18	-.20
15.	.48	.59	.35	-.26	-.27	-.35
16.	.34	.48	.23	-.49	-.34	-.57
17.	.30	.16	.15	.11	.11	.23
18.	.16	.19	.28	.24	.25	.15

Coefficients of congruence of the factor loadings reported by Snyder and Gangestad, and the factor loadings obtained from my Canadian and Kenyan subgroups are presented in Table 5. Their level of similarity is an index of the construct validity of the Self-Monitoring Scale in the United States, Canada, and Kenya.

Table 5

Coefficients Congruence Between Snyder's Factor Loadings and My Canadian and Kenya Subgroups' Factor Loadings

	Coefficients of Congruence Between		
Factor Pairs	Snyder's and Canadian	Snyder's and Kenyan	Canadian and Kenyan
1 and 1	.98	.96	.94
2 and 2	.93	.73	.64
1 and 2	.12	.02	.13
2 and 1	.13	.00	.13

Applying Tucker's (1951) criteria that coefficients ranging from .99 down to .93 define factor congruence and that coefficients less than .45 define lack of factor congruence, I concluded that the two factors from my Canadian sample were congruent with Snyder and Gangestad's two factors from their American sample. Factor one was congruent between the American and the Kenyan samples -- the scale measured the first factor in both cultures. The Coefficient of congruence of factor two between the two samples was high but not congruent. Factor one was congruent between the Canadian and the Kenyan samples. The Coefficient of Congruence between Canadian and Kenyan subgroups for factor two was high, but not congruent.

In summary, the Self-Monitoring Scale appeared to be measuring the same constructs in the American, in the Canadian, and in the Kenyan subgroups. Therefore it was appropriate to compare the mean scores obtained by the three subgroups in self-monitoring.

Tests of My Four Hypotheses

Hypotheses One and Two

My first two hypotheses were that Kenyans would be higher than Canadians in self-monitoring, and that females would be higher in self-monitoring than males. To test these hypotheses the total self-monitoring scores were analyzed using a 2 x 2 (Culture by Sex) ANOVA. The results of this analysis showed that there were significant main effects for culture, $F(1, 457) = 34.24$, $p < .001$, and for sex, $F(1, 457) = 18.30$, $p < .001$. There was no significant interaction between culture and sex, $F(1, 457) = 0.20$, n.s. As can be seen from Table 6, contrary to both my hypotheses, the Kenyans scored lower than the Canadians, and the females scored lower than the males on self-monitoring.

Table 6

Scores of the Canadians and the Kenyans on the Total Self-Monitoring Scale, the Public Performing Subscale, and the Other-Directedness Subscale

	Scale					
	Total Self-Monitoring		Public Performing		Other-Directedness	
	Canadian	Kenyan	Canadian	Kenyan	Canadian	Kenyan
Male						
N	125	75	125	75	125	75
Mean	10.7	8.8	4.6	3.2	3.0	2.8
SD	3.5	3.2	2.0	1.8	1.2	1.2
SE	0.3	0.4	0.2	0.2	0.1	0.1
Female						
N	182	76	182	76	182	76
Mean	9.4	7.2	3.7	2.5	2.8	2.5
SD	3.4	3.0	2.0	1.7	1.4	1.1
SE	0.3	0.3	0.2	0.2	0.1	0.1

To further explore the nature of the cultural and gender differences in self-monitoring, I decomposed the total self-monitoring scores into the subscales identified by Briggs and Cheek (1988): Public Performing and Other-Directedness. Results of 2 x 2 (Culture by Sex) ANOVA, for Public Performing showed that there were significant main effects for culture, $F(1, 457) = 30.16$, $p < .001$, and for sex $F(1, 457) = 19.84$, $p < .001$. There was no significant interaction between culture and sex, $F(1, 457) = 0.16$, n.s. As can be seen from Table 6, the Kenyans scored lower than the Canadians, and the females scored lower than the males on Public Performing.

The results for Other-Directedness show that there were no significant main effects for culture, $F(1, 457) = 3.14$, n.s., and sex, $F(1, 457) = 2.61$ n.s. There was also no significant interaction between culture and sex, $F(1, 457) = 0.51$ n.s. As can be seen from Table 6, the mean score for the Canadians and the mean score for the Kenyans, and also the mean score for the males and the mean score for females on Other-Directedness, were quite similar.

Hypothesis Three

My third hypothesis was that students who have lived most of their lives in the rural environments would be higher in self-monitoring than students who have lived most of their lives in the urban environments. To test this hypothesis the total self-monitoring scores were analyzed using a 2 x 2 x 2 (Environment by Culture by Sex) ANOVA. The results of this analysis showed that there was a significant main effect for culture, $F(1, 344) = 31.10$, $p < .001$, and for sex, $F(1, 344) = 6.96$, $p < .01$. There was no significant main effect for environment, $F(1, 344) = 0.04$, n.s., and there was no significant interactions between culture and environment, $F(1, 344) = 2.25$, n.s.; between environment and sex, $F(1, 344) = 0.00$, n.s.; and between culture and sex, $F(1, 344) = 0.32$, n.s. As can be seen from Table 7, the mean scores for urban dwellers were similar to the mean scores for rural dwellers in both cultures and genders on self-monitoring.

Table 7

Mean Self-Monitoring Scores of the Urban and Rural Dwellers

	Canadian		Kenyan	
	Urban	Rural	Urban	Rural
Females				
N	84	48	31	31
Mean	9.6	9.8	7.8	7.1
Males				
N	57	30	15	49
Mean	10.4	10.7	9.3	8.3

Hypothesis Four

My fourth hypothesis was that Canadian students interested in teaching would be higher in self-monitoring than the Canadian students interested in science based careers. To test this hypothesis the total self-monitoring scores were analyzed using a 2 x 2 (Career by Sex) ANOVA. The results of this analysis showed that there was no significant main effect for career interest, *F*(1, 306) = 4.07, n.s.

There was significant main effect for sex, $F(1, 306) = 11.70$, $p < .001$. There was no significant interaction between career and sex, $F(1, 306) = 0.02$, n.s. As can be seen from Table 8, the mean scores of students interested in teaching were quite similar to the mean scores of the students interested in science based careers on self-monitoring.

Table 8

Self-Monitoring Scores for the Canadians Interested in Teaching and for the Canadians Interested in Science Based Careers

	Scale					
	Total Self-Monitoring		Public Performing		Other-Directedness	
	Teaching	Science	Teaching	Science	Teaching	Science
Male						
N	46	79	46	79	46	79
Mean	11.2	10.3	5.0	4.4	3.0	3.0
SD	3.4	3.5	2.0	1.8	1.2	1.2
SE	0.5	0.4	0.3	0.2	0.2	0.1
Female						
N	103	79	103	79	103	79
Mean	9.8	9.0	3.9	3.6	2.9	2.8
SD	3.5	3.2	2.2	2.0	1.4	1.4
SE	0.3	0.4	0.2	0.2	0.1	0.2

To further explore the nature of the career interest and gender differences in self-monitoring, I decomposed the total self-monitoring scores into the subscales: Public Performing and Other-Directedness as was identified by Briggs and Cheek (1988). Results of 2 x 2 (Career by Sex) ANOVA, showed that there was significant main effect for sex, $F(1, 306) = 15.58$, $p < .001$. There was no significant main effect for career $F(1, 306) = 2.98$, n.s. There was no significant interaction between career and sex, $F(1, 306) = 0.34$, n.s. As can be seen from Table 8, and the mean scores of the students interested in teaching and the mean scores of students interested in science based careers were quite similar on Public Performing.

The results of ANOVA for Other-Directedness also show that there was no significant main effects for career interest, $F(1, 306) = 0.32$, n.s., and sex, $F(1, 306) = 0.91$, n.s. There was also no significant interaction between career interest and sex, $F(1, 306) = 0.71$, n.s. As can be seen from Table 8, the mean score for the males and the mean score for the females were quite similar, and also the mean score for the students interested in teaching and the mean score for the students interested in science based careers were quite similar on Other-Directedness.

CHAPTER V

DISCUSSION

The chapter opens with an introduction in which the criteria required for conducting cross-cultural studies and the approaches applied in such studies are stated. A summary of my findings is presented and the implications of my findings for the theory of self-monitoring are spelled out. This is followed by a comparison of my findings with other related cross-cultural studies on self-monitoring. The implications of my findings and the implications of the findings of other cross-cultural studies for Snyder and Gangestad's biochemical theory of the development of self-monitoring are critically examined. Attempts are made to explain my findings and the findings of others in cultural terms. The chapter ends with conclusions and recommendations for further research on the development of self-monitoring.

Criteria and Approaches to Cross-Cultural Studies

Berry and Dazen (1974) argue that there are three criteria that must be met if cultures are to be meaningfully compared. These criteria are: functional equivalence, conceptual equivalence, and metric equivalence. Functional equivalence refers to the similarity with which a particular problem is solved in different cultures. For instance, punctuality in United States and in Canada is measured precisely in terms of clock or watch, while in the rural parts of Kenya it is measured globally in terms of the position of the sun. Punctuality has functional equivalence in United States and Canada but not in Kenya. The results of a pilot study conducted prior to this study, in which the Kenyan graduate students at the University of Alberta were asked to comment about the functional specificity of the items, showed that no items in the Scale were functionally specific to the Canadian or to the Kenyan culture. The Kenyan graduate students involved in the pilot study had lived most of their lives in Kenya and had stayed in Canada for at least one year at the time they were interviewed.

Conceptual equivalence involves the demonstration that the test and the concepts have identical meaning in the cultures being examined. Use of simple sentences can eliminate the conceptual confusion. The pilot study indicated that the words used in the items in the Self-Monitoring Scale were not ambiguous to the Kenyan and Canadian subjects.

Metric equivalence deals with the comparability of the scores obtained when a scale is administered in different cultures. Metric equivalence is important for personality testing especially when mean scores between cultures are to be equivalent. Differences between means are difficult to interpret because in different cultures valid items can have different endorsement rates. To demonstrate metric equivalence in any two cultures, it is necessary to establish that the statistical behavior of the items in each culture is the same. This entails comparison of item analyses (proportions endorsing the items), correlations of each item with the total scale, item intercorrelations, and factor analysis. Factor analysis is the most powerful of these methods. According to Kline (1981) if the factor loadings of tests have been shown to be similar across cultures, then all the objections to tests which have been made by cross-cultural researchers are silenced. To argue that items with factor loading similar in the two cultures are culture specific is meaningless. If the factor patterns of variables turn out to be different in different cultures, then it is meaningless to compare the mean scores.

Two approaches commonly applied in cross-cultural psychological studies, the emic and etic (Triandis, 1974), were used in this study. The emic approach, which claims that cultures have to be understood in their own terms, negates cross-cultural comparisons. Investigating self-monitoring differences between males and females in the Kenyan or in the Canadian culture, and investigating the difference between rural and urban dwellers in both cultures are emic approaches, because they involve the consideration of factors within each specific culture that could contribute to the differences between the sexes and between rural and urban dwellers. On the other hand, the etic approach, claims that there are universal laws that govern human behavior, independent of the culture. In applying the etic approach one argues that a personality trait like self-monitoring is a human characteristic and should be expressed in all human beings regardless of culture.

Summary of My Findings

Factor one was congruent among the American, the Canadian, and the Kenyan subgroups. Factor two was congruent between the Americans and the Canadians, but similar to factor two for the Kenyans. It was therefore legitimate to compare the Canadian and the Kenyan college students in self-monitoring -- the Self-Monitoring Scale measured basically the same constructs in both cultures.

The findings of this study were contrary to my expectations. The Canadians were significantly higher than Kenyans in self-monitoring -- and yet I had hypothesized that the Kenyans would be higher than the

Canadians in self-monitoring. Males in both the Canadian and the Kenyan cultures were significantly higher than females in self-monitoring -- and yet I had hypothesized that the females would be higher than the males in self-monitoring. Canadians scored significantly higher than Kenyans in Public Performing, but there was no significant difference between them in Other-Directedness. Similarly the males in both cultures scored significantly higher than the females in Public Performing, but there was no significant sex effect on Other-Directedness.

There was no significant difference between rural and urban dwellers in self-monitoring -- and yet I had hypothesized that the rural dwellers would be higher than the urban dwellers in self-monitoring. There was no significant difference between the Canadian students training to become teachers and the Canadian students training to join science based careers in self-monitoring -- and yet I had hypothesized that the students interested in teaching would be higher than the students interested in science based careers in self-monitoring. Also there was no significant difference between the subjects interested in teaching and the subjects interested in science based careers in both Public Performing and Other-Directedness.

Implications of My Findings for Self-Monitoring Theory

My findings showed that culture and sex are important factors in the development of self-monitoring. They challenge Snyder's conclusion that attempts to implicate cultural factors in the development of self-monitoring have come out empty-handed. The findings also contradicted my original theory that a more traditional society with many social rules is likely to have a high proportion of high self-monitors. The results of the study showed that the level of self-monitoring is not correlated to career interest, and Snyder's belief that the Self-Monitoring Scale can be used for career placement is doubtful. The Scale failed to differentiate between subjects interested in a supposedly high self-monitoring career (teaching) and subjects interested in supposedly lower self-monitoring career (science).

Comparison of My Findings and Other Cross-Cultural Studies

My finding that the Canadians were significantly higher than the Kenyans in self-monitoring is quite comparable to the finding of Gudykunst, Yang, and Nishida (1987) that Americans were significantly higher than Japanese and Koreans in self-monitoring. Gudykunst et al. administered the 18-item Self-Monitoring Scale to the Americans, to the Japanese, and to the Koreans. They reported that the mean score (10.8) for the Americans was significantly greater than the mean score (7.8) for the Japanese and the mean score (8.1) for the Koreans. There was no significant difference between the Japanese and the Koreans in self-monitoring. My finding that the males in both the Canadian and the Kenyan cultures were higher in self-monitoring than the females contradicts Gudykunst et al.'s finding that there were no significant sex differences in self-monitoring in the Japanese and in the Koreans, but it is supported by the findings reported by Frazier and Fatis (1980), and Sullivan and Harnish (1990). Both studies reported a significant sex effect, males scoring higher than the females in self-monitoring in the American culture. My finding that there was no difference between between the subjects interested in teaching and the subjects interested in science in self-monitoring agrees with Larkin's (1987) finding that the total 18-item Self-Monitoring Scale could not differentiate between the best and the worst teachers in self-monitoring.

Implications of My findings and the Findings of Others on the Biochemical Theory of Self-Monitoring.

My findings that the Canadians were higher than the Kenyans, and that, males in both cultures were higher than females in self-monitoring and Gudykunst et al.'s finding that the Americans were higher than the Japanese and the Koreans in self-monitoring challenge Snyder's (1987) and Gangestad's (1986) contentions that self-monitoring is largely genetic in origin and that attempts to implicate cultural factors in the development of self-monitoring have come out empty-handed. These studies clearly implicate cultural factors in the development of self-monitoring. Gangestad speculated that the specific genetic factors underlying individual differences in self-monitoring operate through biochemical pathways. He speculated further that sex steroid hormones -- testosterone, estradiol and androgens in the prenatal period are the biochemicals through which specific genes mediate the development of self-monitoring. To justify his speculation, Gangestad quoted a number of studies which have attempted to link the level of steroids to aggression, to sex, to left-right cerebral hemisphere structural and functional dichotomy, and to self-monitoring. He quoted Resnick (1982) who reported a relationship between the level of steroid and aggressivity -- the higher the level of steroid the greater the degree of aggression in the individual. He also quoted Hyde (1984) who attributed the relation between aggressivity and sex to prenatal levels of steroids and concluded that the two sexes differ substantially in prenatal blood levels of sex steroids. Gangestad also quoted Geschwind (1983) who speculated that there a relationship between the level of steroid and the development of the cortex. Geschwind reported that higher levels of testosterone were associated with relatively greater right-brain development, and low levels with relatively greater left-brain development. Gangestad also quoted Rim (1982) who tested male subjects only and reported that low self-monitors outperformed high self-monitors on tests of verbal ability, whereas high self-monitors scored higher on tests requiring spatial ability. Gangestad linked Rim's finding that, the low self-monitors were higher in verbal ability and high self-monitors higher in spatial ability to the differences in lateralization of the brain. Maccoby and Jacklin (1974) reported that, verbal ability, is a cognitive function lateralized toward the left hemisphere and one on which girls and women out perform boys and men, and spatial ability, is a cognitive function lateralized toward the right hemisphere and one on which boys and men outperform girls and women.

It is difficult to explain cultural differences found in this study and those reported by other studies in self-monitoring in terms of differences in the levels of steroids in subjects from different cultures. The difficulty arises from the fact that the factors that produce individual differences are not necessarily the same as those that produce group differences, and from the fact that there is no study that has measured and compared the levels of steroids in subjects from different cultures. But probably the difference in the level of steroids can be used to explain the differences between males and females in self-monitoring. Compared to females, males have higher levels of steroid -- testosterone, are more aggressive, and are higher in self-monitoring. The conclusion that the males have higher levels of testosterone and are therefore higher in self-monitoring would apply to the Americans, the Canadians, and the Kenyans. Frazier and Fatis (1980), and Sullivan and Harnish (1990) showed that American males were higher than American females in self-monitoring, and my study showed that Canadian males and Kenyan males were higher than the Canadian females and Kenyan females respectively is self-monitoring. But the conclusion would be inconsistent with the Gudykunst et al.'s (1987) finding that Japanese and Korean males and females were similar in self-monitoring. Do the Japanese and the Korean males and females have similar levels of steroids? If so, why? The preceding conclusions are not mutually compatible and they show that there are still some missing links in Snyder and Gangestad's biochemical explanation of the development of self-monitoring and that there is a direct relationship between the level of steroids and the level of self-monitoring.

Explanation of My Findings and the Findings of Others on Self-Monitoring in Cultural Terms

The difference between Americans and Japanese and Koreans, and the difference between Canadians and Kenyans in self-monitoring cannot be attributed to the language in which the scale was set. In Gudykunst et al.'s (1987) study, the Japanese and the Korean respondents completed the Self-Monitoring Scale in their native languages. Following Brislin's (1970) recommendation, Gudykunst et al. translated the original scale which was set in English into Japanese and Korean languages and back-translated it into English to assure equivalency of meaning. The back-translation assures that the denotative meaning of the items on the scale are equivalent. Their finding that the Americans had significantly higher scores than Japanese and Koreans on self-monitoring could not be attributed to language factor. In this study the scale was administered to the subjects in English language. Canada and Kenya are Commonwealth countries and English is the major medium of instruction in schools in both countries (except Quebec Province) from elementary school to University. Thus, the difference between Canadians and Kenyans in self-monitoring cannot be attributed to the language in which the scale was written.

On the surface, it appears that highly collectivistic cultures like Japan and Kenya would reinforce high self-monitoring and individualistic cultures like the United States and Canada would reinforce low self-monitoring. Snyder (1987) became a victim of superficial argument when he conjectured that a culture with many rules like Japan is likely to have a high proportion of high self-monitors. My study and that of Gudykunst et al. (1987) have shown that this is not the case.

Superficially, it also appears that there is a relationship between the level of industrialization and the level of self-monitoring in the society. Canada is more industrialized than Kenya and the Canadians are higher in self-monitoring than the Kenyans. But in the light of the fact that Japan is one of the most industrialized nations in the world and yet Japanese are significantly lower than the Americans in self-monitoring, it would be illogical to argue for a relationship between the level of industrialization and the level of self-monitoring.

Hofstede (1983) reported three aspects of culture related to self-monitoring. These are: individualism, uncertainty avoidance, and masculinity. Individualism, as measured by the 23-item Self-Consciousness Scale developed by Fenigstein, Scheier, and Buss (1975) refers to the degree to which members of a culture focus on the individual or group memberships. High individualism is reflected in a focus on "I", an emphasis on individual achievement, autonomy, and need for specific friendships. Low individualism (i.e., collectivism) involves a focus on group memberships rather than individual autonomy. Hofstede (1983) reported that the Americans had significantly higher scores than the Japanese and the Koreans on individualism index. Gudykunst et al. (1987) on the other hand reported that Americans had significantly higher scores than the Japanese and the Koreans in self-monitoring.

Gudykunst et al. (1987) explained the difference between the Americans, and the Japanese and the Koreans in self-monitoring in terms of the degree of individualism of the three cultures. In their explanation of the differences between the Americans, the Japanese and the Koreans in self-monitoring Gudykunst et al. quoted studies reported by Snyder (1979) and Doi (1986). Snyder reviewed research on self-monitoring, and concluded that high self-monitors imagine what the prototypic person for the situation would be and try to be that person, while low self-monitors draw upon an enduring self-image or self-conception that represents knowledge of his or her characteristic actions in the behavioral domains most relevant to the situation. Doi on the other hand reported that members of collectivistic cultures' self-conception include their relationship with others present in the situation and that members of collectivistic cultures must take status relationship into consideration when deciding on how to behave in a particular situation. They do not base their behavior on how a prototypic person would behave in the situation and they would not be high self-monitors given Snyder's conceptualization. Members of individualistic cultures' self-conception does not necessarily include status relationship and they are more likely to base their behavior on the behavior of a prototypic person in the situation and hence would be high self-monitors. Gudykunst et al. concluded that members of cultures high on individualism like the United States engage in more self-monitoring than individuals from collectivistic cultures like Japan and Korea because they base their behavior on the behavior of a prototypic person in the situation.

Kenya is a collectivistic society and this study showed that the Kenyans were lower than Canadians in self-monitoring. In Kenya status relationship is emphasized in the family, at school and in the society in general. The naive belief that a person of a higher social status is always right and should be obeyed by those in the lower social echelons is still held strongly. For instance, in the family, the parents are always "right" and the children are expected to the follow the rules laid down by them to the letter. In schools the teacher is the "know it all" and challenging a teacher in a discussion is seen as a demeaning behavior -- undermining his or her authority. Thus, children are conditioned at home and in the school to behave in a certain "accepted" way. Such type of conditioning does not call for higher self-monitoring of the situations but trains the individuals to believe that certain ways of behavior are "right" while others are "wrong" and it also conditions the individuals to follow rules religiously even if they are outdated.

Uncertainty avoidance is the extent to which members of a given society feel uncomfortable with ambiguity. Members of societies high in uncertainty avoidance, support beliefs or rules promising certainty and they and they support and maintain institutions protecting conformity. A culture in which there are so many rules to follow is likely to be higher on uncertainty avoidance and lower on self-monitoring. Hofstede reported that Japanese and Koreans are significantly higher than Americans in uncertainty avoidance. Snyder (1987) reported that Japan is full of rules and it can be assumed that the Japanese prefer to follow rules in order to avoid uncertainty. It is therefore not surprising that they had a higher score on uncertainty avoidance index. In a culture where there are few social rules to follow like the United States, the individuals are compelled to study the social situations in order to understand them and to tailor their behaviors according to the behavior of the prototypic persons in the situations. It is not surprising that the implicit theory people from other cultures have about the Americans is that they can make quick and superficial friendships, which is a textbook characteristic of higher self-monitoring individuals. Although Canadians and Kenyans have not been tested on uncertainty avoidance, it can be predicted that the Kenyans would have higher scores than the Canadians on the index (if the theory that individuals from collectivistic cultures are higher than the individuals from individualistic cultures in uncertainty avoidance is valid). This prediction is also based on the fact that the Kenyans had lower scores in self-monitoring than the Canadians and on my observation that there are many unwritten social rules in Kenya than there are in Canada.

Masculinity is the degree to which a culture emphasizes differentiated sex roles, performance, and ambition. Cultures low on this index value fluid sex roles, service, and interdependence. Hofstede (1983) reported that Japanese are significantly higher than United States in masculinity index. A culture like Kenya where roles in the society are largely defined according sex is definitely high in masculinity. In Kenya, particularly in the rural areas there are well defined sex roles -- for instance, females are given full powers over the kitchen and it is deplorable to find a man cooking in the kitchen in the presence or absence of the wife. Women have been conditioned to love their role as kitchen tenders and they dislike men who mingle with them in the kitchen. Men are still largely seen in Kenya as the producers and they are expected to be aggressive in manipulation of situations so that they can provide for women. The societal expectation of men in Kenya thus calls for high self-monitoring.

It would be misleading at this point to conclude that, in cultures high in masculinity, males are higher in self-monitoring than females. Japanese and Koreans were significantly higher than the Americans in masculinity and yet there was no significant difference between the Japanese and the Koreans males and females in self-monitoring (Gudykunst et al. 1987). On the other hand, the Americans were low on masculinity and yet some studies have reported significant difference between males and females in self-monitoring. For instance, Frazier and Fatis (1980) reported a significant sex effect, males scoring higher than the females in the American sample. They concluded that females focus more upon relevant inner states to mediate their behavior, while males focus upon social or environmental cues to mediate their behavior.

Culture defined globally in terms of geographical boundaries as was done in this study cannot be uniform in social patterns. For instance, the social patterns in the rural parts of Kenya are quite distinct from those in the urban centers. There are more unwritten social rules in the rural areas than there are in cities and towns. The degree of conformity to the social norms is higher in the rural parts of Kenya than in the urban areas. Rural life is more collectivistic while urban life in more individualistic. The degree of masculinity is higher in the rural parts of Kenya. Socio-economic roles are largely differentiated on sex basis in the rural parts of Kenya. For instance women in the rural areas are still largely the hewers of firewood, the collectors of water, the baby-sitters and the cooks. Men are seen as the producers, they are expected to feed, clothe and provide shelter for the family.

If there is a relationship between the degree of individualism, uncertainty avoidance, and masculinity and the level of self-monitoring as was reported by Hofstede (1983), then there should have been a significant mean score difference between rural and urban dwellers in self-monitoring -- particularly in the Kenyan subjects. Students who attend Kenya Technical College and were involved as subjects in this study come from both urban and rural parts of the country. The results of this study showed that there was no significant environmental effect on self-monitoring -- the mean score of the students who have lived most of their lives in the rural environment was similar to the mean score of students who have lived most of their lives in the urban environments.

Similarly there was no significant mean score difference between the Canadians who have lived most of their lives in the rural areas and those who have lived most of their lives in the urban environments. From my point of view, the similarity between the Canadian rural and urban dwellers in self-monitoring can be easily accepted because the difference between urban and rural life in quite small.

When the 18-item Self-Monitoring Scale was decomposed into two subscales -- measuring Public Performing and Other-Directedness (according Briggs and Cheek, 1988), the Canadians scored significantly higher than the Kenyans in Public Performing subscale, but there was no significant difference between them in Other-Directedness. Similarly the males in both cultures performed significantly higher than the females in Public Performing subscale, but there was no significant sex effect on Other-Directedness. These findings agree with those reported by Tomarelli and Shaffer (1985) that individuals high on Public Self-Consciousness are also high on self-monitoring, but the findings contradict the results reported by Hofsede (1983) and Gudykunst et al. (1987) that individuals high on individualism are also high in self-monitoring.

Tomarelli and Shaffer (1985) investigated the aspects of "self" that self-monitors monitor. They administered the Self-Monitoring Scale and the 23-item Self-Consciousness Scale (Fenigstein et al., 1975) to the subjects. Self-Consciousness Scale measures three orthogonal factors -- Private Self-Consciousness, Public Self-Consciousness, and Social Anxiety. They reported that those scoring high on Self-Monitoring Scale were low in Social Anxiety, low in Private Self-Consciousness and high in Public Self-Consciousness, whereas the prototypic low self-monitoring individuals were high in Social Anxiety, low in Public Self-Consciousness and high in Private Self-Consciousness. Social Anxiety is a measure of the discomfort that one experiences in the presence of others. Public Self-Consciousness is a measure of one's awareness of self as a social object that has an impact on others and it appears to be closely related to Public Performing as measured by the Self-Monitoring Scale. It is therefore rational to expect high self-monitors to perform at a higher level than low self-monitors in Public Self-Consciousness as measured by the Self-Consciousness Scale and in Public Performing as measured by Self-Monitoring Scale. For instance, the Canadians who were higher in self-monitoring outperformed the Kenyans who were low in self-monitoring in Public Performing.

Private Self-Consciousness is a measure of inwardly focused attention. The Private Self-Consciousness Subscale consists of items such as "I'm generally attentive to my inner feelings and "I'm constantly examining my motives," items that indicate the extent to which people attend to and reflect on their thoughts, feelings, attitudes and other private aspects of self. It is the subscale of the Self-Consciousness Scale that measures the degree of individualism. Hofstede (1983) reported that the Americans are significantly higher than the Japanese and Koreans on individualism index, while Gudykunst et al. reported that the Americans were significantly higher than the Japanese and the Koreans in self-monitoring. From these studies it could be concluded that the Americans who were reported to be high on the Individualism index and high on the Self-Monitoring Scale, were high in Private Self-Consciousness and also high in Public Self-Consciousness. Such a conclusion is contradictory and does not tell us which aspect of the "self" the Americans are good at monitoring. It is not clear therefore how and why the Americans would be high on Private Self-Consciousness and Public Self-Consciousness Subscales.

Explanation of the Relationship Between Teaching and Self-Monitoring

Larkin (1987) established the existence of a relationship between self-monitoring and teaching. High self-monitors rated themselves as significantly more able than low self-monitors to change their teaching style to fit the needs of the students. In another study, Larkin provided the subjects of her study with the Self-Monitoring Scale and then divided them at random into two equal groups. Using the Scale, one group rated the "best teacher you have ever had", and the other group rated their "worst teacher". The t-test comparing ratings of the best and worst teachers revealed no significant difference in teacher self-monitoring. The total self-monitoring score was them decomposed into three subscale score as identified by Briggs et al. (1980). For both best and worst teacher conditions separate scores were computed for the Extraversion factor, the Acting factor, and the Other-Directedness factor. Best teachers were rated significantly higher in Extraversion, whereas worst teachers were rated significantly higher in Other-Directedness. There was no difference in the subscale measuring the Acting factor. Persons scoring high on Other-Directedness tend to be tense and awkward in public.

Larkin's (1987) finding that the best teachers were significantly less other-directed and were more extraverted than the worst teachers is certainly understandable in light of this description of the variable. The extraversion factor is positively related to self-confidence and social competence and is perceived to be desirable in the best teachers. Larkin concluded that the answer to the question "are good teachers perceived to be high self-monitors?" depends on how self-monitoring is conceptualized and measured, and that separate scoring for each of the self-monitoring scale factors is more appropriate than use of the full scale score.

My study showed that, there is no significant difference between the mean score of the Canadian students training to become teachers and the mean score of the Canadian students training to join science based careers in self-monitoring. The 18-item Self-Monitoring Scale was decomposed into two subscales - measuring Public performing and Other-directedness. The results showed that there was no significant difference between the mean score of the subjects interested in teaching and the mean score of subjects interested in science based careers in both Public performing and Other-directedness. I conclude that the Self-Monitoring Scale as whole, or its subscales cannot be used to differentiate the individuals interested in teaching from those interested in science based careers. If the assumption that teachers are high self-monitors is valid, then it could be the practice and not the potential that make them so. But there is no study that has shown that teachers who are already practicing are higher in self-monitoring than scientists or any other group of professionals.

Recommendations for Further Research

Although my study and the studies of other researchers on self-monitoring have shown that there are cultural differences, it is also valid to say that, within each culture there are high and low self-monitors. There is need for further research to investigate specific interactions between parents and children which could lead the development of low or high self-monitoring in children.

It would also be interesting to compare the left-handed individuals and the right-handed individuals in self-monitoring. It is generally believed that the lefties have well developed right cerebral hemisphere of the brain which controls the development of spatial ability, and if Rim (1982) report that the high self-monitors outperformed low self-monitors is spatial ability is valid, then the lefties should obtain higher scores than the right-handed individuals in self-monitoring.

Delimitation of the Study

The subjects involved in this study were college students and the findings therefore may not be generalizable to the entire Kenyan and Canadian populations.

Limitations of the Study

1. The study could not fully explore all aspects of the cultures that might be contributing to the difference in self-monitoring.

2. The difference or similarity in self-monitoring between the students interested in teaching and those interested in science based careers might not inform us adequately about the level of self-monitoring in teachers in the field.

Conclusions

The findings of this study enhanced our understanding on the development of self-monitoring. It challenged the Snyder's contention that the development of self-monitoring is largely genetic in origin and that attempts to implicate cultural factors in the development of self-monitoring have come out empty-handed. It showed that there was significant cultural and sexual differences in self-monitoring.

In sum, it can be stated that there are still more questions than answers about the development of self-monitoring. The biochemical explanation proposed by Snyder and Gangestad lacks adequate evidence. Cultural and sexual differences in self-monitoring are significant and cannot be ignored. How culture affects the development of self-monitoring is still poorly understood. The 18-item Self-Monitoring Scale has high construct validity for cross-cultural studies and can be used in such studies without much ado. Snyder's belief that the Self-Monitoring Scale can be used for career placement is questionable and needs further investigation.

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APPENDICES

Appendix i

Biographical Form.

Read each question or statement carefully. Respond by circling letter A, B, C, or D that corresponds to your most appropriate choice and by filling in the blank spaces provided.

1. Have you lived out of your country for more than 1-year?

   A. Yes **B.** No

2. Your age in years fall between **A.** 15 - 20 **B.** 21 - 25 **C.** 26 -40

3. What is your sex? **A.** Female **B.** Male

4. What is your birth order?

   A. Only child **B.** Middle born **C.** Last born **D.** First born

5. What is your religion?

   A. Christian **B.** Muslim **C.** None **D.** Other (specify)____________

6. Where have you lived most of your life?

   A. Urban **B.** Suburban **C.** Rural (or farm)

7. What is your weight in pounds (Lb.) or Kilograms (Kg.)?

   _______________ Lb. or _______________ Kg.

8. What is your height in feet and inches? ________________________

9. How did your mother relate to you during childhood?

   A. Authoritarian **B.** Democratic

   C. Laissez-faire (non-interference) **D.** Not applicable

10. How did your father relate to you during childhood?

    A. Authoritarian **B.** Democratic **C.** Laissez-faire **D.** Not applicable

11. Do you intend to attend graduate school in the future?

    A. Yes **B.** No

12. What is your native language? __________________________________

13. What occupation/job/career do you plan to pursue when you finish school? __________________________________

Appendix ii

Kodero H.M.Nelly,
3A-8916-112St.,
Edmonton, T6G-2C5.

Dear Participant,

RE: INFORMED CONSENT

I hereby **kindly request you** to participate in my study. The purpose of my study is to investigate the factors that influence how people respond to different social clues. You are asked to **complete an instrument** consisting of **18 items** and a biographical form consisting of **13 items**. The items in the instrument are **simple**. For example, "In different situations and with different people, I often act like very different persons". You are asked to indicate whether the statement is **true or false** as applied to you. It will take you about **30 minutes** to respond to all items in the instrument You are asked **not to write** your **name** on any of the papers provided during data collection. **Anonymity** of your participation in the study and **confidentiality** of your responses is **guaranteed** by the researcher. The study requires your **sincere** and **accurate** response to all the items. You have **full right** to **withdraw** from the study at any time you so wish. You may contact the researcher for more information about the study or/and you may request the researcher to communicate to you the **findings** of the study.

Please sign below if you accept to participate in the study. Thank you very much for volunteering to participate.

Yours sincerely,

Kodero, H. M. Nelly (Researcher).

Your signature ____________________ Date______________

Appendix iii

Instructions to the Test Administrator

1. Inform the students in your class that a graduate student in the department of Educational Psychology (University of Alberta) is conducting a psychological research and he is kindly **requesting you to participate in the study**. In addition, inform them that data collection takes only 10 to 15 minutes.
2. Distribute the **Informed Consent** letter to the students. Give them time to **read it**. Request those who are willing to participate to indicate to you by show of hand. Ask them to sign the letter. Collect the signed Informed Consent letters and put them in one envelope addressed to the researcher.
3. Distribute the **Instrument (Section A)** to the students who **volunteered** to participate in the study. Give them **enough time** to complete it. **Make sure** that they have responded to all the items in the instrument before you distribute the Biographical Forms to them.
4. Distribute the **Biographical Form (Section B)** to the participants. Give them **enough time** to complete it.
5. **Collect** from each participant the **completed Instrument** and the **completed Biographical Form.**
6. **Staple** the completed **Instrument** and the completed **Biographical** Form together and put them in another envelope. **Address** the envelope to the researcher.

Appendix iv

The Original 25-item Self-Monitoring Scale

1. I find it hard to imitate the behavior of other people. (F)
2. My behavior is usually an expression of my true inner feelings, attitudes, and beliefs. (F)
3. At parties and social gatherings, I do not attempt to do or say things that others will like. (F)
4. I can only argue for ideas which I already believe. (F)
5. I can make impromptu speeches even on topics about which I have almost no information. (T)
6. I guess I put on a show to impress or entertain people. (T)
7. When I am uncertain how to act in a social situation, I look to the behavior of others for cues. (T)
8. I would probably make a good actor. (T)
9. I rarely seek advice of my friends to choose movies, books, or music. (F)
10. I sometimes appear to others to be experiencing deeper emotions than I actually am. (T)
11. I laugh more when I watch a comedy with others than when alone. (T)
12. In a group of people I am rarely the center of attention. (F)
13. In different situations and with different people, I often act like very different persons. (T)
14. I am not particularly good at making other people like me. (F)
15. Even if I am not enjoying myself, I often pretend to be having a good time. (T)
16. I'm not always the person I appear to be. (T)
17. I would not change my opinions (or the way I do things) in order to please someone else or win their favor. (F)
18. I have considered being an entertainer. (T)
19. In order to get along and be liked, I tend to be what people expect me to be rather than anything else, (T)
20. I have never been good at games like charades or improvisational acting. (F)
21. I have trouble changing my behavior to suit different people and different situations. (F)
22. At a party I let others keep the jokes and stories going. (F)
23. I feel a bit awkward in company and do not show up quite so well as I should. (F)
24. I can look anyone in the eye and tell a lie with a straight face (if for a right end). (T)
25. I my deceive people by being friendly when I really dislike them. (T)

For information on administration and scoring, see Snyder (1974). Items are keyed in the direction of high self-monitoring (T = true; F = false).

Appendix v

The 13-Item Self-Monitoring Scale

Reply to each item by marking the appropriate circle on your answer sheet. Please use a Number 2 or Hb pencil and make your marks heavy, dark, thick, glossy.
These statements concern your reactions to a number of different situations. No two statements are exactly alike, so consider each statement carefully before answering. Select the response that tells how true or false the statement is, as applied to you.

Use this response format:

A. certainly, always true.
B. generally true.
C. somewhat true, but with exception.
D. somewhat false, but with exception.
E. generally false.
F. certainly, always false.

1. In social situations, I have the ability to alter my behavior if I feel that something else is called for.
2. I am often able to read people's true emotions correctly through their eyes.
3. I have the ability to control the way I come across to people, depending on the impression I wish to give them.
4. In conversations, I am sensitive to even the slightest change in the facial expression of the person I'm conversing with.
5. My powers of intuition are quite good when it comes to understanding others' emotions and motives.
6. I can usually tell when others consider a joke to be in bad taste, even though they may laugh convincingly.
7. When I feel that the image I am portraying isn't working, I can readily change it to something that does.
8. I can usually tell when I've said something inappropriate by reading it in the listener's eyes.
9. I have trouble changing my behavior to suit different people and different situations.
10. I have found that I can adjust my behavior to meet the requirement of any situation I find myself in.
11. If someone is lying to me, I usually know it at once from that person's manner of expression.
12. Even when it might be to my advantage, I have difficulty putting up a good front.
13. Once I know what the situation calls for, it's easy for me to regulate my actions according.

Items, 1, 3, 7, 9, 10, 12, & 13, Comprise the Ability Subscale. Items, 2, 4, 5, 6, 8, & 11. Comprise the Sensitivity Subscale. The scores on this scale range from 0-65.

Appendix vi

Permission to Use Letter to Mark Snyder

Kodero H.M.Nelly,
3A-8916-112St.,
Edmonton, AB.,
Canada.
T6G-2C5.
14th Apr 1990.

Dr. Mark Snyder,
University of Minnesota,
Dep. of Psychology,
75 East River Road,
Minneapolis,
Minnesota 55455.

Dear Sir,

RE: 18-ITEM REVISED SELF-MONITORING SCALE.

With your permission, I would like to use your 18-item Revised Self-Monitoring Scale in my study. Please send to me a copy and some information on its administration and scoring.

I am a graduate student in the department of Educational Psychology at the University of Alberta, currently working on a thesis.

Yours sincerely,

Kodero H. M. Nelly.

Appendix vii

Snyder and Gangestad's Factor Loadings

DATE: May 16, 1991

TO: $\overset{M}{D}$r. Kodero, in care of Mark Snyder

FROM: Steven Gangestad

SELF-MONITORING FACTOR LOADINGS, MEAN, AND STANDARD DEVIATION (18 ITEM MEASURE)

Mean = 9.59
S.D. = 3.42

Factor Loadings (Unrotated matrix, 2-factor extraction, PAF)

Item	Factor 1	Factor 2
1	.40	.07
3	.18	.14
4	.25	.09
5	.40	.03
6	.46	.31
8	.57	-.02
12	.47	-.19
13	.22	.46
14	.28	-.21
16	.19	.44
17	.14	.21
18	.41	.03
20	.50	-.17
21	.33	.04
22	.48	-.28
23	.34	-.49
24	.30	.11
25	.16	.24

Note: This analysis rerun using same cases (N =1918) as those reported in Gangestad & Snyder (1985) and Snyder & Gangestad (1986). Stat. package used: SPSS-X

Here's the data from
Steve Gangestad. I
hope it's useful to you.
Mark Snyder